

Master Thesis Business Administration

Field: Supply Chain Management

Coping with public tenders: Supporting suppliers

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Abstract:

The purpose of this paper is to examine on which factors consultancy support can improve the chances of winning a public tender. Companies looking to do work for the public sector often state that EU tendering directives are difficult to work with and make it challenging to write bids. Seeking expert support outside the firm is a method of coping with this problem. This expert support can be provided on a number of factors.

First, a literature study was conducted to find which factors influence bid success, divided into market, firm and bid factors. Afterwards, semi-structured interviews were conducted with consultancy firms specializing in public tender bid management and company tenderdesks, as these also specialize in bid management for public tenders. During these interviews cases were discussed, both successful and failed bids. A literature review yielded a breakdown of the bidding process and factors which should positively influence the bid. Both the bid breakdown and factors were analyzed using the collected data. Statistical analysis could not link the steps of the bid or the factors to bid success.

Additionally, respondents were questioned on best practices. Best practices were found with regards to preliminary work, bid process and writing of the bid. However, these are not supported by the data from the interviews, likely due to the small sample (N=52) and measurement level of the factors influencing success. More research is required to find out what support is effective.

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1 Introduction

According to EU data, there are 250,000 public institutions which spend 14% of GDP on the procurement of various products and services (European Commission, 2017). The EU purchasing directives stipulate how public procurement should be conducted, per the values of a transparent, fair and competitive single market in the EU (European Commission, 2017). Another driver in public procurement is the application of government policy in certain areas, such as increasing sustainability (Brammer & Walker, 2011) achieving social outcomes (McCrudden, 2004, November), or stimulating innovation (Aschhoff & Sofka, 2009).

Research on public procurement has focused on several topics. A large stream of research is concerned with improving public procurement performance by professionalization, more competition and better financial performance (Raymond, 2008, Caldwell, Walker, Harland, Knight, Zheng & Wakeley, 2005). Another topic within public procurement research is compliance to the directives and purchasers' perceptions of the directives (Gelderman, Ghijzen & Brugman, 2006). What is evident in existing research is a focus on the buyer side of public procurement.

The goal of this paper is to examine the supplier side of public procurement. More specifically, how do suppliers and potential suppliers deal with public tenders. What choices do these companies make? Get consultants to help with writing a bid? Outsource the entire process to a third party? This paper will focus on the aspect of consultancy and will not look at companies which choose to do the entire tender internally. The focus on consultancy is because consultancy firms need to demonstrate their effectiveness to customers to retain them, so their offering to customers should have a positive effect on the bid. Public procurement is distinct from purchasing in the private sector, therefore what works for one does not necessarily work for the other. Since there is little literature on the supplier side of public procurement in general, this research will be partially based on "grey" literature. The used grey literature will primarily consist of guides for selling to the public sector and the like.

2 Research approach

2.1 Goal of the paper

The goal of this research is to identify which strategies are used by suppliers to win bids in the setting of public tendering. It is important to note that entering the winning bid is the goal of every supplier participating in a tender. This research will also systematically review the effectiveness of the bidding strategies. Therefore, it is important to define *strategy* and *effectiveness* in the context of this research. Strategy is defined as: a plan, method, or series of maneuvers or stratagems for placing bids. Effectiveness is defined as: those strategies which lead to winning the contract. In short, choosing an effective strategy leads to a better bid which leads to a higher probability of winning the tender. The intent of this research is to look into how the possibility of entering the winning bid can be increased. Due to the difficulty in researching this directly, this research will focus on the role of consultancy in the bidding process and whether getting outside help on a tender or parts of a bid positively influence the factors of success for a bid. By looking at the involvement of consultancy quantitatively and qualitatively through interviews, a partial view of how the chance of success can be improved can be given.

2.2 Research question

To gain insight in the work of consultancy firms on bids for public tenders and how the factors leading to success are influenced by consultancy, the following research question was defined:

How much involvement is there in a bid from consultancy and which factors of the bidding process are positively impacted by the involvement of consultancy?

2.3 Approach

The research conducted in this paper will be both qualitative and quantitative in nature. Little is known of the degree of involvement of consultancy to deal with tenders. To answer these research questions, it is necessary to identify what is already known on the supplier side of public tendering. First a literature study will be conducted to ascertain which factors influence successful bidding. This is done by using the search engines Google Scholar and Scopus. The terms used were “*supplier public tenders*”, “*support public tenders*”, “*aid public tenders*”, “*success bid public tender*” “*bid management public tender*” and variations of these phrases. The articles which contained relevant information were used to snowball to other relevant articles. Secondly a detailed overview of the bid process from the perspective of the supplier

will be made. Data for this research will be collected from consultancy firms specialized in public tenders. This data collection will be done by conducting interviews with consultants using the overview of the bid process. From the interviews, a picture should emerge of which parts of the bid process are supported by the consultants. Additionally, it is important to know if the support of a part of the bid led to winning the bid. Thus, information for a number of bids, the kind of support given, the total number of bids and the outcome of the bid will also be collected. From the interviews, follow-up interviews at the firms may be scheduled if this is deemed relevant. This research will analyze 52 cases from nine different companies. The collected information will be used to gain insight in the involvement of consultancy in bidding for public tenders and how consultancy affects the factors of success.

2.4 Relevance

2.4.1 Scientific relevance

The paper's scientific relevance is found in the extension of knowledge in the body of public procurement research. More specifically, by improving the available knowledge on supplier behavior in the public procurement setting, specifically during the bidding process of a public tender. This research increases the body of knowledge available and furthers understanding of effects of tendering and bidding in the field of public procurement.

2.4.2 Practical relevance

The paper's relevance for practice is twofold. First, for companies supplying the public sector or those wanting to do so. These companies gain insight into the possible strategies for public sector bidding and which strategies are effective. For consultancy firms, new avenues to approach the bidding process are made available. From the buyer side, more insight in how suppliers handle bids, may lead to insights on how to improve public procurement further. For example, offering guidance in the tender on which parts a supplier can gain benefits from soliciting expert outside support.

3 Literature review

The literature review will first discuss the factors which influence the success of a bid and how these will be used in the current research. Thereafter, the breakdown of the bid from the perspective of a supplier will be discussed. Due to an expected lack of scientific literature detailing the supplier side of public procurement, a selection of grey literature sources will be used to clarify the bid process and available strategies for suppliers.

3.1 Factors influencing successful bids

The factors influencing the success of bids will be split into three parts based on the scientific literature on success factors. This literature was found using online the online search engines Scopus and Scholar. A number of keywords were used to search for literature. The extensive search for literature makes it highly likely that all relevant literature pertaining the topic was found. First the market level factors will be discussed. this is followed by the company factors which influence the success of bids. Finally, the bid level factors will be discussed.

3.1.1 Market factors

External factors, these are defined as those factors that individual firms have limited influence to make them more favorable. Some factors could be influenced by lobbying to authorities, or moving the company in closer proximity to buyers. However, it should be noted that market level factors are likely too difficult to change for an individual company or even for business sectors. Outside support or consultancy will also be unable to influence market factors. Therefore, this research will disregard market level factors and focus on the bid level.

Favorable investment environment

The first factor is the availability of a favorable investment environment (Zhang, 2005). Zhang states that the environment in which the bidder has to operate should be conducive to public-private cooperation. This means that the political, legal economic and commercial aspects should be taken written into law by government to protect suppliers from for example expropriation or the effects of corruption.

Economic viability

Zhang (2005), also discusses the relevance of economic viability, which is the second factor. According to Zhang, economic viability is dependent on: long-term demand of products/services, limited competition from other projects, acceptable profit and public affordability of goods or services provided. Kutlina-Dimitrova & Lakatos (2016) are more specific and state that the total number of bids has a large influence on the viability of a bid.

Helpfulness of procurement officials

The fifth factor deals with the helpfulness of procurement officials towards potential suppliers. Uyarra, Edler, Garcia-Estevez, Georghiou & Yeow (2014) found that feedback on unsuccessful bids was very diverse in quality and lacked a consistent approach. The quality of

feedback received influences the chances of a firm to win a bid in the future. Bad feedback makes it difficult to improve shortcomings in bids. Coupled to this is the availability of mentoring. McKeivitt & Davis (2015) found that suppliers could benefit from mentoring by buyers. There is however currently no case of this being applied in a formalized manner. The authors state that applying mentoring could lessen supplier's reliance on third parties such as consultants.

3.1.2 Company factors

Company factors are firm specific factors and thus can be more easily influenced than the external factors.

Firm size

The first company factor to be discussed is firm size. Albano et al. (2015), found that in the awarding of contracts small firms are likely to win the low value contracts. In contrast medium and large companies were more often awarded the large contracts. This situation is explained by the perceived lack of production capacity that small firms have in the eyes of purchasers. The authors state that small firms could improve their chances by creating joint ventures. This is supported by Crossley et al. (2016, October), who state that the formation of a consortium is an effective practice for winning public tenders. Firm size also ties in with the resources a company has available with regards to winning a bid. Small firms usually lack the necessary skills in their organization to bring bids to a successful end, especially for larger and more complex contracts (Crossley et al., 2016, October). This is supported by Reijonen, Tammi & Saastamoinen (2016) who state that when contract values go up, the likelihood of an SME winning the contract goes down. Survey research among SME's conducted by Karjalainen, & Kemppainen (2008) found that these companies perceived that their lack of size led to a lack of resources with which to compete for the tender.

Physical distance

The second factor is the physical distance between buyer and potential supplier. Research conducted in French public procurement by Mamavi, Nagati, Wehrle & Pache (2014), concluded that even though spatial proximity cannot be used as a selection criterion in tenders, there is a positive correlation between distance and the number of contracts awarded. This view is partially supported by Albano, Antellini Russo, Castaldi & Zampino (2015), who found that when distances were large, small firms were preferred, whereas when

distances were small, large firms were the preferred partners. Interestingly, information was gathered from a database on low value e-procurement transactions in Italy. So, distance is also a factor even when all procedures are done online with no face-to-face contact between buyer and supplier.

Performance history

The third factor is performance history. EU tendering rules stipulate that only the current offering of a supplier can be assessed. However, Mamavi et al. (2015), found that past performance of companies had influence on their chances to win future bids. Suppliers who won at least five contracts in a given year had 60% chance of winning at least 6 contracts in the following year. This means that suppliers should focus on winning at least 5 contracts per year as this will lead to benefits in the following year. The authors postulate that this trend is due to learning curve effects at the supplier firm on what public buyers want out of a bid.

Entrepreneurial orientation

The fourth company factor is the presence of entrepreneurial orientation (EO) in the firm. EO means that a company is focused on the identification and exploitation of new opportunities, outside of its core business. Reijonen et al. (2016), found that companies which score high on EO were more active in seeking information on tenders and subsequently submitting bids. The authors found that EO is a good indicator for how active a firm is in acquiring customers in the public sector.

Market orientation

The fifth company factor is market orientation. Tammi, Saastamoinen & Reijonen (2014), found that the adaption of market orientation had a positive influence on both seeking for tendering requests and subsequently submitting bids. Market orientation is defined as a company's strategy towards the creation and acquisition of market information, interpreting it and responding to it. Research showed that only the interfunctional coordination dimension was statistically significant. According to the authors this should be interpreted as:

“This finding seems to suggest that while it is important for SMEs to know the public sector customer and its preferences, as well as the competitors’ means to meet those preferences, what it comes down to is the assessment of the firm as to

whether its own abilities and resources are adequate to satisfy the customer's expressed needs." (Tammi et al., 2014, p. 332)

The authors state that companies could benefit from finding out who are potential customers and sharing this information within the company.

Firm resources

The sixth factor is firm resources. Karjalainen & Kempainen (2008) researched SME's perceptions on resources required for a tendering process. SME perception with regards to legal and administrative resources influenced participation in tendering processes.

E-Systems

The final company factor relates to E-Systems. Karjalainen & Kempainen (2008) found that companies with E-Systems such as electronic order processing and invoicing were more likely to be a public sector supplier than those companies lacking E-Systems. The phenomenon was not present for municipal procurement. Investment in IT can lead to better performance in public tenders.

3.1.3 Bid factors

Bid factors are those factors which are most easily changed as these can be adapted before or during the bid process.

Bid quality

Ahadzi and Bowles (2004), found that the quality of technical aspects of a bid are rated very highly by buyers.

"Clear and robust designs are often seen to be of key importance, as both public and private sector parties are likely to be more comfortable with proven and well-understood solutions." (Ahadzi & Bowles, 2004, p. 972)

A good quality bid will speed up the bidding process as there is less need for clarifications and time-consuming adaptations of the original bid. The authors state that bid quality has two main categories, which are technical bid quality and financial bid quality. Technical bid quality has the following aspects: clarity of submissions and responses to queries, robustness of outline of technical proposal, provision of sound technical guarantee and innovative technical solutions. Financial bid quality deals with: level of tariff proposed, credibility of financiers,

possible exposure of public organization to financial risk, level of financial guarantees proposed, payment mechanisms proposed, level of government funding or guarantees required, length of concession period proposed and level of financial returns to public organization. It should be noted that the authors looked at infrastructure projects and that the factors dealing with quality are not applicable to all types of tender.

Relational capability

Flynn & Davis (2016), define relational capability as: “SMEs being able to promote themselves as credible suppliers to the public sector”. By actively promoting their business, companies increase visibility and showcase their selling points. Additionally, it involves if possible influencing the tender specifications to better suit a company’s specific strengths. Another important part of relational capability is pre-tender engagement to create demand for new products and informing public buyers before the start of a tender.

Procedural capability

Flynn & Davis (2016), state that: “Procedural capability embodies a firm’s ability to deal with the administrative and technical demands of the tendering process”. The first step in procedural capability is understanding what public buyers want from their suppliers and how buyers evaluate potential suppliers. The second step is being able to give a good account of strengths as a supplier in the tender submission. Procedural capability is also important after a failed bid, as firms need to know how to get feedback. Feedback gives insight into the strengths and weaknesses of the bid and can be used to improve future bids. Additionally, it is important for firms to identify which bidder won the contract and why. In case of a successful bid it is critical that companies can manage the contract as promised during the tendering procedure.

3.2 Factors and current research

For the purpose of this research, only the bid factors will be considered, the other factors will be assumed to be unchangeable. Market factors are too complex to be changed by a single company. Company factors are changeable, as they deal with characteristics of the company participating in a public tender. However, these factors require large amounts of time and effort to change. For example, if a company is too small to effectively manage and deliver a bid, it is unlikely that this can be changed in time to win the tender. Although the market and company factors are not changeable in the short term, it is important to take note of these

factors as they will have an impact on the chance of the bid to succeed. The bid level factors represent smaller changes in how a company and its processes operate. The formation of project teams to work on tenders, or the hiring of outside experts are options which can be executed in a timely fashion from the perspective of dealing with a tender.

3.3 Bid breakdown

In this section, the bid breakdown will be discussed. First it is important to know what a tender looks like from the perspective of the bidding party. The following list detailing the bid process from the supplier’s perspective, is adapted from work by van der Burg (2012) and Jacobs (2009).

Phase	Nr.	Activity	Remarks
Pre-tender phase	0	Preliminary work	Talking to potential customers before publication of announcement
	1	Finding tender announcements	TED, TenderNed
	2	Assessing announcements	Possibility of winning, new market entry, competitive advantage, location, etc.
	3	Requesting tender documentation	Download from announcement or by contacting tendering party
	4	Assessing chances for successful outcome	
	5	Decision to bid	Can you bid, do you want to bid
Tender phase	6	Form a project team	Project leader
	7	Creating a checklist	Planning and targets
	8	Gathering information	Gathering questions, relevant information required for bid, certifications
	9	Asking questions	Which questions to ask, formulation, how to ask them
	10	Writing draft bid	Layout, language
	11	Reading answers and implementing them	
	12	Final decision to bid	
	13	Setting the price	
	14	Simulating competitor bids	Companies may want to simulate how competitors will score on a tender to see if and how their own bid should be adapted to increase the possibility of winning.
	15	Writing a “readable” bid	
	16	Writing of final bid	
	17	Submitting bid	
	18	Presenting of bid to tendering party	Preparation, use of media
	19	Bid outcome	

Post-tender phase	20	Requesting evaluation	Possibility to give/receive feedback to tendering party
	21	Objecting to bid outcome	
	22	Starting work for customer	

The steps in the bid breakdown can be linked to bid level factors mentioned in the literature. The following steps are linked to *bid quality*: requesting tender documentation (3), decision to bid (5) writing a draft bid (10), final decision to bid (12), setting the price (13), writing a readable bid (15), writing the final bid (16), submitting bid (17), presenting of bid to tendering party (18), bid outcome (19) and starting work for customer (22). The steps linked to bid quality are those which are connected to the deliverable, i.e. the bid. *Relational capability* covers three steps: preliminary work (0), simulating competitor bids (14), requesting evaluation (20). These steps deal with the knowledge of the bidder of the tendering party and other bidders to the tender. *Procedural capability* contains: finding tender announcements (1), assessing tender announcements (2), assessing chances for successful bid outcome (4), form a project team (6), creating a checklist (7), gathering information, (8), asking questions (9), reading answers and implementing them (11), objecting to bid outcome (21). These steps are the internal process which supports the bid.

4 Method

4.1 Data collection

The purpose of this research is to answer the following question: *How much involvement is there in a bid from consultancy and which factors of the bidding process are positively impacted by the involvement of consultancy?* In order to answer this question, data to analyze consultancy involvement in a bid will be collected using semi-structured interviews, based on the breakdown of the bid process. In a semi-structured interview, the topics and most important questions are defined, but follow-up questions are not (Baarda, De Goede & Teunissen, 2009). This gives the interviewer the flexibility to adapt to the specific setting of each interview. This interview method is suitable for the research question as it is not clear how consultancy is involved in the bid, thus making fully structured methods impossible. Additionally, the semi-structured form can lead to information not envisioned by the interviewer, due to information asymmetry between interviewer and interviewee. In the interview, past consultancy projects on the topic of public sector bidding will be discussed, with regards to support sought and success or failure of the bid. After the interview, additional

data from the discussed bids will be collected such as industry and turnover. Notes will be taken and permission sought to record the interview for later analysis and coding. The interviews will be coded according to the bid process to see if strategies can be identified.

The participants for the interviews will be selected from consultancy companies specialized in public procurement. The reason for collecting data with these consulting companies is twofold. First, as these companies must make a profit, their support has to help the customer in winning the bid, otherwise the consulting company will lose customers. Secondly, these consultancy companies will have information on their customers readily available which makes for easier data collection than trying to find the clients which sought support. In order to find companies, an internet search will be conducted using a variety of keywords such as *"tender advice"*, *"tender support"*, *"tender aid"*, *"public sector bidding"*, etc. These companies will be approached via telephone and email to participate in the research, in return the results of the research will be made available to them. See Appendix 1 for the interview protocol.

4.2 Sample

Interviews were conducted with 9 companies, of which three were tenderdesks and six were consultancy firms. These interviews led to a total of 52 valid cases, 25 successes and 27 failures. Data was collected on which parts of the breakdown support was given by the consultancy firms and tenderdesks. This was inserted into excel as binary data, either yes or no. Additionally, information was collected on the type of tender, the tendering party (government, municipality, etc.), details on scoring, details on the bidding company, reasons for seeking support, if there was a difference between the support sought and provided. The views and opinions of the respondents were also gathered. Information was written down in an interview protocol and recorded for later reference.

4.3 Data analysis

The gathered data was analyzed using the IBM SPSS statistics package. Using the crosstab functionality, the items from the bid breakdown were analyzed to see if they influenced the success of the bids using Pearson's Chi Square. Assumptions were checked to use Chi Square, and the data was found to fit the assumptions for the test statistic. Secondly, to analyze the bid factors a logistic regression was conducted. Finally, to identify which steps are often done together, a cluster analysis was conducted.

5 Observations from interviews

In the following section, a number of observations from the interviews will be reported.

5.1 Differences between consultancy firms and tenderdesks

The main difference between consultancy firms and tenderdesks is the way in which work is structured. Tenderdesks offer a standard package from the perspective of the bid breakdown, i.e. regardless of the tender, the same parts of the bid breakdown will be done. Of course, exceptions do happen, but these are usually because other departments in the company do not follow procedure. Tenderdesks facilitate the process for the bid, communicate with the tendering party and ensure all parts of the bid are delivered on time and to requirements. Consultancy firms offer a more flexible approach to the tender. They can manage the process, focus on elements of the bid, such as writing style, or take over the entire bid process from the client.

5.2 Consultancy work

Normal consultancy work on bids for public tenders can be divided in four broad areas. The first is support on specific parts of the bid, such as writing. The second is supporting the entire bid process from start to finish. The third area consists of training and education of clients on topics in the sphere of public tenders, such as legal issues or Best-Value-Procurement. The final area deals with improving the bid process of the client, through training, organizational design and personnel selection.

5.3 Reasons for requesting help

Respondents mentioned three main reasons for the help requests from their clients. First of all, clients profess a lack of knowledge on tenders and public procurement. A specific example of this are clients which have always worked for a public agency which did not tender, but is required to do so for future contracts. The second reason was that clients possessed insufficient knowledge of a specific type of tender. Usually this was the case when tender was conducted according to best-value-procurement or the tender contained elements of this method. The third reason, was that clients lacked the capacity to do all the tender related work themselves. Consultants were brought in to process the workload. On a related subject, respondents indicated that clients tend to underestimate the amount of time and work involved in the bid. By the time that support is sought, time pressure has become a serious issue.

5.4 Reported best practices

Respondents were asked what they thought worked to win tenders. From their responses, the following best practices were formulated. First of all, it is important to get to work before the tender is published. This involves having knowledge of the tender cycle of potential and existing customers. The tender cycle is the schedule on which new tenders are published by a tendering party. If a company knows when the last tender for a product or service was published, it is possible to predict roughly when the next tender will be published. This knowledge can be used to gain advantages and influence purchasers so a tender is formulated in a certain way which favors the firm. Before a tender is published, time should be taken to get to know the potential customer and make the most of relations with existing customers. Additionally, customer specific information should be recorded and made available within the organization. An example of this information is who at the tendering service are the decision makers for specific tenders.

Secondly, best practices with regards to the process can be identified. The process of the bid are elements which are supportive to it, such as the project team and planning. There should be a clear planning for tackling the tender, describing who does what and when. In this planning sufficient time should be available to work on the different elements of the bid. To support the planning, sufficient and correct resources should be made available. Sufficient resources mean that the amount of resources made available is large enough that the bid can be finished in a timely fashion and according to requirements. Correct resources focus on ensuring that the personnel assigned to the project teams possesses the correct skills and knowledge to work on the bid. Respondents have indicated that when their clients involved unskilled personnel in the bid team this negatively impacted the result. Sufficient oversight of the bid should be ensured and one person designated who is responsible for the process. It is important to look at more than just the current tender, the process should be properly configured and the organization should be supportive of the activities undertaken for a tender.

Thirdly, the following best practices with regards to writing the bid were identified. Write the bid with the product/service to be sold in mind. The needs of the tendering party should be foremost in the bid, followed by how the client is going to satisfy them. Most companies have standard documentation detailing their products and services, such as brochures. This standard documentation should be rewritten to match the needs of the tendering party. By

doing this the bid entered will feel more authentic for the tendering party and will stand out from the crowd. Write the bid persuasively, as the tendering party needs to be convinced that this bid is the best one. Use “SMART” methodology to write the quality part of the bid, as this will show the tendering party exactly in which way and on what schedule their needs will be met. When the bid has been written, take the time to review it. The review should check that the above points are properly written down in the bid and that the bid itself is free of spelling and grammatical errors.

Finally, with regards to the tender itself, the time should be taken to look at the documentation published by the tendering party. Are the needs and award criteria clearly specified? If not, contact the tendering party and ask for clarification.

6 Statistical analysis

The following chapter will be split in two parts. The first part deals with the analysis of single steps on bid success. The second part will deal with the analysis of multiple steps with regards to success, namely the bid factors and a cluster analysis.

6.1 Analysis of the sample

From Table 2 we can see that the average number of steps on which advice was given, in the bid breakdown is 13 and the standard deviation is 7 steps. The minimum number of steps provided was two with a maximum of 22.

Table 2 – Descriptives of the bid breakdown

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Average	52	2,00	22,00	13,1538	6,89241
Valid N (listwise)	52				

Table 3 details the number of times a step of the bid breakdown was used or not including percentages. N=52.

Table 3 – Percentages and counts per variable from the bid breakdown

Nr.	Variable label	No	% No	Yes	% Yes
0	Preliminary work	36	69.2	16	30.8
1	Finding tender announcements	27	51.9	25	48.1
2	Assessing announcements	33	63.5	19	36.5
3	Requesting tender documentation	26	50.0	26	50.0
4	Assessing chances for successful outcome	25	48.1	27	51.9
5	Decision to bid	26	50.0	26	50.0
6	Form a project team	19	36.5	33	63.5
7	Creating a checklist	17	32.7	35	67.3
8	Gathering information	12	23.1	40	71.9
9	Asking questions	14	26.9	38	73.1
10	Writing draft bid	17	32.7	35	67.3
11	Reading answers and implementing them	13	25.0	39	75.0
12	Final decision to bid	15	28.8	37	71.2
13	Setting the price	30	57.7	22	42.3
14	Simulating competitor bids	19	36.5	33	63.5
15	Writing a “readable” bid	10	19.2	42	80.8
16	Writing of final bid	9	17.3	43	82.7
17	Submitting bid	14	26.9	38	73.1
18	Presenting of bid to tendering party	27	51.9	25	48.1
19	Bid outcome	17	32.7	35	67.3
20	Requesting evaluation	21	40.4	31	59.6
21	Objecting to bid outcome	33	63.5	19	36.5
22	Starting work for customer	52	100.0		

The step preliminary work was used the least, followed by assessing announcements and objecting to bid outcome. The most applied step was writing of final bid, followed by the writing of a readable bid and reading answers and implementing them. The step starting work for customer was never used, but the logical explanation for this is that neither the tenderdesks nor consultancy firms start work on the contract at the end of a tender. A 100% stacked bar chart was created to see if visual inspection of the variables showed trends or anomalies. See figure 1 below. From the bar chart, it can be seen that there are no trends.

Bid Breakdown by Percentages

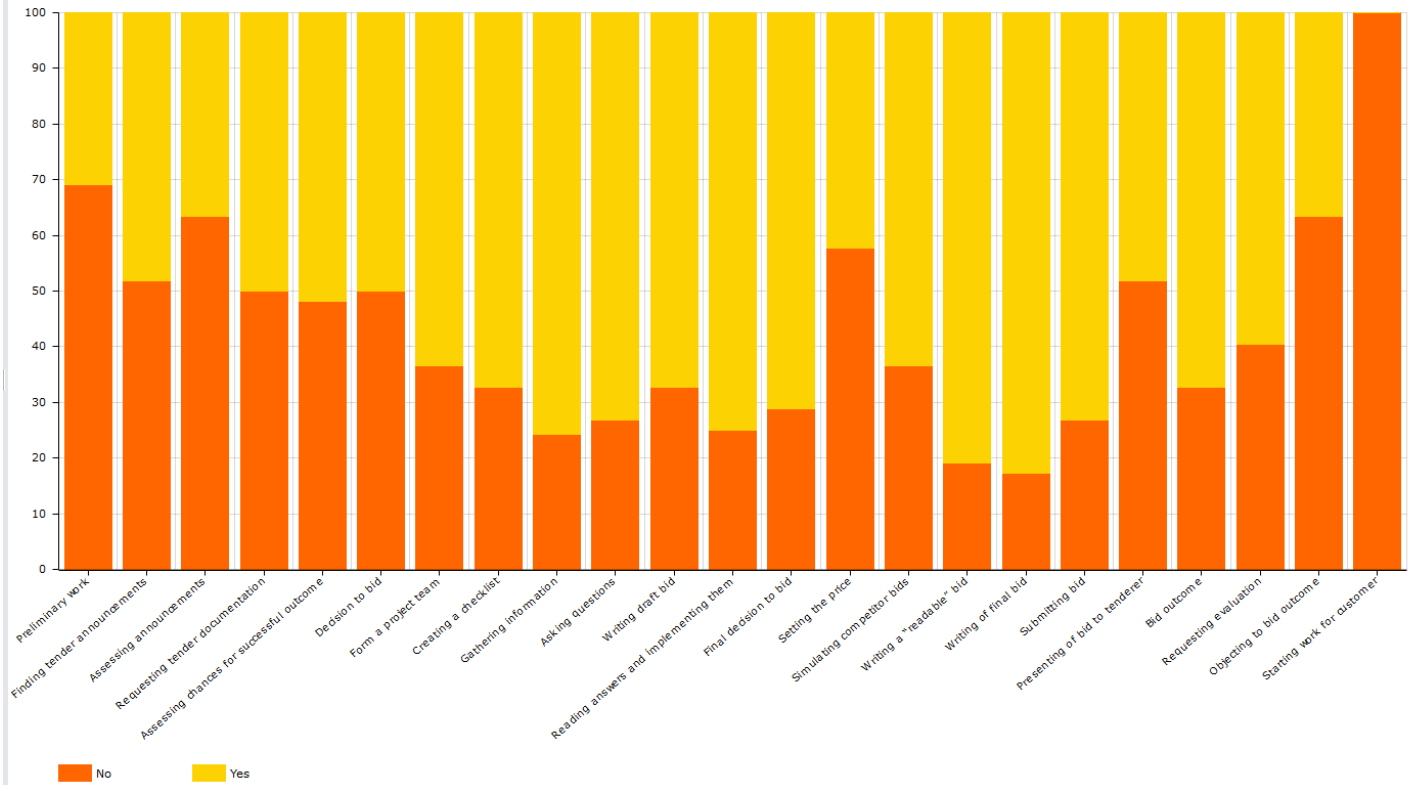


Figure 1 – Stacked bar chart of bid breakdown

To find out which combinations of steps in the bid breakdown were often used, cluster analysis was conducted on the bid breakdown variables. Cluster analysis makes groups of cases which share certain characteristics (Hair, Black, Babin & Anderson, 2013). The binary function and squared Euclidean distance were used. In order to decrease chaining of clusters, the complete linkage method for clustering was used. To preserve homogeneity, the clusters on the dendrogram were interpreted up to a distance of 10 (see Appendix 3 for dendrogram). The cluster analysis identified six clusters. Table 4 details the clusters and how often the variables were used per cluster in percentages.

Table 4 – Clusters and breakdown steps percentages

Nr.	Cluster 1 (N = 17)	Cluster 2 (N = 6)	Cluster 3 (N= 2)	Cluster 4 (N = 11)	Cluster 5 (N = 10)	Cluster 6 (N = 1)
0	53%	100%	0%	0%	0%	17%
1	100%	100%	0%	9%	10%	0%
2	100%	0%	0%	9%	10%	0%
3	94%	100%	0%	18%	20%	0%
4	100%	100%	0%	27%	0%	17%
5	94%	100%	0%	27%	0%	17%
6	100%	100%	0%	82%	0%	17%

7	100%	100%	0%	100%	0%	17%
8	100%	100%	0%	100%	60%	0%
9	100%	100%	50%	100%	10%	33%
10	100%	0%	50%	100%	40%	33%
11	100%	100%	100%	100%	0%	50%
12	100%	100%	100%	100%	0%	17%
13	82%	0%	0%	64%	0%	17%
14	100%	100%	100%	64%	10%	0%
15	100%	0%	100%	91%	90%	67%
16	100%	0%	100%	100%	90%	67%
17	94%	100%	100%	100%	70%	0%
18	65%	0%	100%	82%	70%	0%
19	94%	100%	100%	100%	0%	0%
20	94%	100%	50%	55%	0%	33%
21	71%	100%	0%	0%	0%	17%
22	0%	0%	0%	0%	0%	0%

For cluster 1, the following steps were used the most: Finding tender announcements (1), assessing announcements (2), requesting tender documentation (3), assessing chances for successful outcome (4), decision to bid (5), form a project team (6), creating a checklist (7), gathering information (8), asking questions (9), writing draft bid (10), reading answers and implementing them (11), final decision to bid (12), simulating competitor bids (14), writing a “readable” bid (15), writing of final bid (16), submitting bid (17), bid outcome (19), requesting evaluation (20). In short, the cases in cluster 1 cover most of the bid process and can be typified by the do (almost) everything approach.

The following steps were used the most in cluster 2: preliminary work (0), finding tender announcements (1), Requesting tender documentation, requesting tender documentation (3) assessing chances for successful outcome (4), decision to bid (5), form a project team (6), creating a checklist (7), gathering information (8), asking questions (9), reading answers and implementing them (11), final decision to bid (12), simulating competitor bids (14), submitting bid (17), bid outcome (19), requesting evaluation (20), objecting to bid outcome (21). It is important to note that the six cases in this cluster came from the same respondent. The cases in cluster 2 also cover a substantial part of the bid, but exclude steps on writing the bid (15, 16).

In cluster 3 the following steps were used the most: reading answers and implementing them (11), final decision to bid (12), simulating competitor bids (14), writing a “readable” bid (15), writing of final bid (16), submitting bid (17), bid outcome (19). There are only two cases in this cluster. The cases in this cluster have in common that they start late in the process of the bid, only starting at step 11.

The following steps were used the most in cluster 4: creating a checklist (7), gathering information (8), asking questions (9), writing draft bid (10), reading answers and implementing them (11), final decision to bid (12), writing a “readable” bid (15), writing of final bid (16), submitting bid (17), bid outcome (19). The cases of this cluster have in common that the work done by consultancy starts at the beginning of the tender phase of the bid breakdown and ends when the tender phase ends. Cluster 5 contained the following combination of most used variables: writing of readable bid (15) and writing of final bid (16). The cases in this cluster can be typified as bid writing, where the client does most of the steps in the process but wants support to write the bid towards the tendering party and reviews. For cluster 6 the most used variables were reading answers and implementing them (11), writing of readable bid (15) and writing of final bid (16). Cluster 6 can be considered an entropy group with cases which are possible outliers (Hair et al., 2013). A possible typology of these cases would be the same as cluster 5, i.e. writing and reviewing of the bid. However, the cases in this cluster possess little commonality.

In short, the following typology of clusters can be identified. Cluster 1 contains the do (almost) everything cases, cluster 2 contains a variation on do (almost) everything, cluster 3 contains the latecomer cases, cluster 4 contains the tender phase cases, cluster 5 contains the writing and reviewing cases and cluster 6 contains the leftovers.

6.2 Breakdown steps

Next, the steps were analyzed using Pearson’s Chi-Square. This test looks for a possible relationship between two categorical variables. The steps from the bid breakdown were compared to the success or failure of a bid. The following test is very limited in the aspects to be tested. The analysis does not look at the many possible other factors can which influence the bid, such as how the support is implemented by the client, or the quality of work done in the steps. Involvement on a step says nothing of the quality of that step. Additionally, the view

of this research is that success means winning the bid. A differing view of success could be improved quality of the bid. It is therefore important to be aware of the limitations of this analysis when reading the following section.

Table 1 of Appendix 4 shows the results of the influence of the bid steps on bid success. None of the variables were statistically significant, meaning that there is no relationship between individual bid steps and the success of a bid. It was not possible to test variable 22 (starting work for customer) as this variable was not used in any of the cases. A cutoff point of 0.25 was used to identify if a step approached significance. The steps creating a checklist (7) and reading answers and implementing them (11) approach significance, both have a positive direction.

Next, a split was made between consultancy and tenderdesks to see if this influenced the results of the Chi-Square. See Table 2 and Table 3 in Appendix 4 for the results of consultancy and tenderdesks respectively. Splitting steps across tenderdesks and consultancy did not yield significant results. This means that for both tenderdesks and consultancy, the bid breakdown variables do not influence success of the bid. When differentiating between consultancy and tenderdesks, there are some steps which approach significance. A cutoff point of 0.25 was used to identify if a step approached significance. For consultancy, these are: decision to bid (5), creating a checklist (7), reading answers and implementing them (11), writing of final bid (16) which have a positive direction and presenting bid to tendering party (18), which has a negative direction. For tenderdesks, this is not the case.

6.3 Bid factors

From literature three bid level factors were derived. The steps from the bid breakdown were added to the corresponding bid factors as stated in paragraph 3.3. This leads to three summed variables representing the bid factors, so the bid factor variables are scores per case. Since the outcome variable success can be either yes or no, a logistical regression is the preferred analysis (Field, 2013). Table 8 details the results of the logistic regression of the bid factors in relation to success.

As can be seen from Table 4 in Appendix 4, none of the bid factors are significant. This means that there is no relation in this data between bid factors and success. The effect of bid quality and relational capability are negative, whereas procedural capability has a positive effect. Effects are very small and a negative effect for bid quality and relational quality are not in line

with expectations. B is the intercept of the constant and S.E. is the standard error of the coefficient for the constant.

7 Discussion

The focus of this research was to answer the following research question: *How much involvement is there in a bid from consultancy and which factors of the bidding process are positively impacted by the involvement of consultancy?*

7.1 The involvement of consultancy in the bid

The following items from the bid breakdown were used the most. The writing of the final bid (82.7%), followed by the writing of a readable bid (80.8%), reading answers and implementing them (75%). The variable starting work for customer was never involved. The least used steps were: preliminary work (30.8%), objecting to bid outcome (36.5%) and assessing announcements (36.5%). As preliminary work is one of the reported best practices, one would expect to see this step to be done more often by expert outside support. On the tenderdesk side, respondents indicated that the account managers or salespeople responsible for (potential) customers in the public sector are often not knowledgeable on the specific needs and requirements of public procurement. It is likely that if this step is conducted properly it has a positive effect on the bid. The steps reading answers and implementing them, asking questions and gathering information were used quite often, respectively 75%, 73.1% and 71.9% of cases. These steps are linked to the procedural capability bid factor, it is likely that companies often need help with this aspect of the bidding process and that they lack the knowledge in-house. The writing of the final bid which was used in 82.7% of cases is in line with literature on bid quality (Ahadzi and Bowles, 2004). Specifically, the step is a part of technical bid quality, which deals with the clarity and specificity of the bid. The financial aspect of bid quality is not supported from the perspective of the bid breakdown, as the variable setting of the price is used in 42.3% of cases, ranking it 20th out of 23 variables. A number of respondents indicated that they preferred to let their clients set the price as the client had more knowledge. However, a differing view was also posited during the interviews. As clients, usually do not have knowledge on how price affects the scoring of a bid, some respondents indicated that price setting was an important tool in affecting the success of the bid. From a literature perspective, it makes sense for expert support to be involved in price setting. So perhaps this step should be more consequently applied by consultancy during the bid process.

The bid factors should be used to find out where a client needs support in the bid, if for example procedural capability is lacking, support should be sought and given on this aspect.

A cluster analysis was conducted to identify which combinations of steps are done together. The analysis led to six distinct clusters of cases with their own combination of steps. The first cluster can be characterized as the do (almost) everything approach. This combination is used by tenderdesks and consultancy firms with small or inexperienced clients with regards to public tendering. Another reason for this combination could be that a client wants a hassle-free bid and opts to let a consultancy firm to do the work. The second cluster contained six cases from one respondent, which was a tenderdesk. This cluster represents a variation on the do (almost) everything theme, the step preliminary work is included. The tenderdesk sought outside support from consultancy firms for the writing aspect of the tender. The third cluster contains just two cases, both from consultancy firms. The dissimilarity of these two cases when compared to the others leads to these two being assigned to their own cluster. This combination of steps focusses on the tender phase of the breakdown model, and starts at reading answers and implementing them. This is strange as this means that the client has sent questions to the tendering party without input from the consultancy firm, but the consultancy firm is the one to implement the answers. Due to the small amount of cases assigned to this cluster and the fact that both bids lost, this combination of steps is probably not helpful in influencing the success of a bid. An alternative way of looking at this combination is that the client has the capability of identifying new business potential and start the bidding process, looking for expert support later in the process. The fourth cluster matches the tender phase from the breakdown bid, starting at creating a checklist and ending at the bid outcome. In this combination expert support is only involved after tender is published. This means that it is up to the client to do the important step of preliminary work. It is uncertain that this narrow view of the bid, with consultancy only getting involved in the tender phase is effective. In the fifth cluster, the focus is on the writing of the bid. Respondents indicated that the translation of standard documentation to fit the tendering party is very important, with one respondent referring to it as the *"pink cloud"*. Working in this way leaves most of the responsibility of the outcome of the bid with the client. The sixth cluster contains six cases, many variables are used but not constantly. The two most used variables are the writing of a readable bid (15) and writing of final bid (16), but only in two thirds of cases. This cluster seems

to contain cases which have little commonality. As such this cluster is cannot be classed as showing a specific method of tackling tenders.

7.2 The influence of consultancy on steps and factors in the bid

As was reported in the results section, none of the variables were statistically significant in relation to the success of the bid. This means that within this dataset, no relation can be found between the factors influencing success of the bid and the use of consultancy. It is however highly unlikely that no such relation exists in reality, as this would mean that the use of consultancy has no added value on the success of the bid, leading to consultancy firms losing customers and ceasing operations. It is important to note that those elements which are done by the clients themselves, instead of by the tenderdesk or consultancy firm could have a large effect on the success or failure of a bid. If the client only starts to seek help late in the process, the groundwork for the bid will already have been laid and therefore also for its success or failure.

The step preliminary work has been reported as having a large influence on the success or failure of the bid by respondents. The step preliminary work includes building relations with potential or existing customers, finding out the tender cycle of (potential) customers and gathering information on the organization. This step is supported by literature on relational capability (Flynn & Davis, 2016), firm performance (Mamavi et al., 2015), entrepreneurial orientation (Reijonen et al., 2016) and market orientation (Tammi, Saastamoinen & Reijonen, 2014). It is therefore interesting that there is no statistical proof for the effectiveness of preliminary work. A possible explanation is that preliminary work is usually in the hands of a consultancy firms' client and in the case of a tenderdesk, responsibility lies with the sales manager. This could mean that the preliminary work is done by people without the right knowledge. All in all, proper preliminary work can improve the likelihood of a bid succeeding.

The step price setting is another interesting case. It is supported by literature and there were respondents who stated that involvement of consultancy on price setting was beneficial to success. However, a substantial part of the respondents indicated that price setting should be left to the client as *"they know their business and cost structure"* - respondent. So, it was expected that price setting would significantly influence bid success, but the results do not support this. From a literature perspective, consultancy involvement in price setting can lead to clearer specifications which are better aligned to the requirements of the tendering party.

This should improve the financial quality aspect of the bid (Flynn & Davis, 2016). Thus, it can be argued that price setting should be applied by consultancy to a bid.

With regards to the bid breakdown as the basis of researching strategy use and effectiveness, several consultancy firms indicated that they did not see the bid breakdown in their work. These respondents indicated that they worked according to a model which only contained four or five phases. It is possible that these models do give a better representation of how a bid can be broken down than the method chosen in this research.

This is also evident in the analysis of the cases according to bid factors from literature. The bid breakdown variables were separated across their corresponding bid factors: bid quality, procedural capability and relational capability. These bid factors did not influence the success of a bid in this way. Interestingly, the direction of bid quality and relational capability is negative, which is contrary to the literature on the topic. The bid factor relational capability has strong links with the comments of respondents on the perceived effectiveness of utilizing the relationship with a (potential) customer and knowledge of this (potential customer). Additionally, consultancy firms indicated that focusing on process, which is the procedural factor, is beneficial to success. This could not be proven in this study.

7.3 Best practices

A number of best practices were mentioned during the interviews with respondents. The first of these being preliminary work. Respondents state that preliminary work is beneficial to the outcome of the tender. Preliminary work as a best practice is grounded in the literature on relational capability by Flynn and Davis (2016) and as such should be beneficial to the outcome of the tender. However, it is often the case that tenderdesks and consultancy are not involved in this part. Additionally, past performance of a firm has an influence on the perception of the bid by procurement officials (Mamavi et al. 2015). If the two were to be combined, this should lead to a positive perception of the entered bid.

The second set of best practices focusses on the process of the bid. Or to quote one of the respondents *“Look at more than just the current tender, optimize the process supporting it”*. Having an effective process is essential to get to a good bid. This entails planning, getting the right and sufficient resources and having the right people working on the bid. Not having a good process will likely mean the effort of bidding is in vain. Often expert support is sought

for parts of the bid, but it is the process which forms the basis of a good bid. The process is the basis of a bid succeeding, without a process there is no bid. This is related to bid level literature on procedural quality from Flynn and Davis (2016), who state that procedural quality is the degree to which a company can deal with the challenges arising from the bid process.

It is important to get all the elements of the bid into a coherent and convincing bid. As such, the final best practice deals with writing the bid. Consultancy firms state that this is where they often add value for the client. Rewriting the standard brochure into a convincing text tuned to the wishes and needs of the tendering party. By writing SMART, the bid shows how needs will be met and when. Although writing is important, there are tender forms, such as Best-Value-Procurement where interviews are part of the assessment. This diminishes the strength of bid writing as the good bid has to be backed up by a good story during the interviews. Naturally, consultancy offers interview training to overcome this issue and prepare their client to elaborate on the written bid.

7.4 Limitations and strengths

This study is limited by a number of factors. First of all, the lack of existing literature on the topic created challenges in designing a model. Secondly, the use of consultancy and tenderdesks as informers for firm behavior in public tenders leads to a narrowing of available information. Additionally, the given information cannot be independently verified. This study does not look at firms which do not have a specialized tenderdesk, but do participate in tenders, which means that a large segment of companies participating in public tenders was ignored. Thirdly, a relatively small sample is likely to not accurately represent reality. A final limiting factor is the way in which the data was used. A datamining approach was chosen to test the influence of consultancy on the factors influencing success, with a lot of analyses conducted to see if any were significant.

The strengths of this study are, looking at the nature and effect of involvement of consultancy on bidding success for public tenders, a topic which has not been previously researched. An in-depth analysis of existing literature on factors influencing the success of a bid. The exploration of the topic through semi structured interviews which leaves room for respondents to offer additional input which they think is also relevant. This study has an exploratory component which sheds light on the practices consultancy firms on the bidding side of public tenders.

7.5 Implications for practice and research

The implications for practice are twofold. On the one hand, for companies looking to do business in the public sector several factors are mentioned in this study which are important to success. On the other hand, consultancy firms gain more insight in the link between literature on the topic and their business practices. Additionally, the best practices mentioned in this paper can be of help in improving their business models.

On the research side, more work needs to be done to understand the behavior of firms when it comes to public tenders. Future research could look directly at the behavior of firms, instead of using consultancy firms as intermediaries. Additionally, different models for company strategies could be developed and tested, to see if there are models which are able to identify factors leading to success. The best practices indicated by respondents could be tested to see if these can positively influence the bid outcome.

8 Conclusion

This is the first study to look at how firms cope with public tenders. Little research has been conducted on firm behavior, and existing research on this topic focusses on how public tenders can influence firm behavior, such as sustainability and innovation stimulation through tenders. This research found no factors significantly influencing bid success. However, from the conducted interviews with tenderdesks and consultancy firms, anecdotal evidence was collected which indicates that there likely are factors which influence bid success. The best practices on preliminary work indicate that the bid factor relational capability is possibly related to success. This goes for the best practices on process, which suggest that the bid factor procedural quality is linked to success. Finally, this is also the case for the best practices on writing, which are indicators for the link between success and the bid factor bid quality. Further research into this topic is required.

9 References

- Ahadzi, M., & Bowles, G. (2004). Public–private partnerships and contract negotiations: an empirical study. *Construction Management and Economics*, 22(9), 967-978.
- Albano, G. L., Antellini Russo, F., Castaldi, G., & Zampino, R. (2015). Evaluating Small Businesses' Performance in Public e-Procurement: Evidence from the Italian Government's e-Marketplace. *Journal Of Small Business Management*, 53(S1), 229-250.
- Aschhoff, B., & Sofka, W. (2009). Innovation on demand—Can public procurement drive market success of innovations?. *Research policy*, 38(8), 1235-1247.
- Baarda, D. B., De Goede, M. P. M., & Teunissen, J. (2009). *Basisboek kwalitatief onderzoek: handleiding voor het opzetten en uitvoeren van kwalitatief onderzoek*. Groningen: Stenfert Kroese.
- Brammer, S., & Walker, H. (2011). Sustainable procurement in the public sector: an international comparative study. *International Journal of Operations & Production Management*, 31(4), 452-476.
- Caldwell, N., Walker, H., Harland, C., Knight, L., Zheng, J., & Wakeley, T. (2005). Promoting competitive markets: The role of public procurement. *Journal of Purchasing and Supply Management*, 11(5), 242-251.
- Crossley, A., Lynch, J., Hurrell, S., & Edwards, R. (2016, October). Assessing the Suitability of Supplier Consortia for Public Procurement Contracts. In *Working Conference on Virtual Enterprises* (pp. 189-199). Springer International Publishing.
- De Moor, A., & Weigand, H. (2004). Business negotiation support: theory and practice. *International Negotiation*, 9(1), 31-57.
- European Commission. (2017). https://ec.europa.eu/growth/single-market/public-procurement_nl. Retrieved February 13, 2017, from Public Procurement, https://ec.europa.eu/growth/single-market/public-procurement_nl
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.
- Flynn, A., & Davis, P. (2016). Investigating the effect of tendering capabilities on SME activity and performance in public contract competitions. *International Small Business Journal*, 0266242616630035.
- Gelderman, C. J., Ghijsen, P. W. T., & Brugman, M. J. (2006). Public procurement and EU tendering directives—explaining non-compliance. *International Journal of Public Sector Management*, 19(7), 702-714.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2013). *Multivariate Data Analysis: Pearson New International Edition*. Pearson.

- Jacobs, P. (2009). *Kans of crime?: inschrijven op een (Europese) aanbesteding*. Kluwer.
- Karjalainen, K., & Kemppainen, K. (2008). The involvement of small-and medium-sized enterprises in public procurement: Impact of resource perceptions, electronic systems and enterprise size. *Journal of Purchasing and Supply Management*, 14(4), 230-240.
- Kennisportal europese aanbestedingen. (2017). *Inschrijven op een Europese aanbesteding*. Retrieved 28 February, 2017, from https://www.europeseaanbestedingen.eu/europeseaanbestedingen/europese_aanbesteding/inschrijven_op_aanbesteding
- Kutlina-Dimitrova, Z., & Lakatos, C. (2016). Determinants of direct cross-border public procurement in EU Member States. *Review of World Economics*, 152(3), 501-528.
- Lewis, G., & Bajari, P. (2011). Procurement contracting with time incentives: Theory and evidence. *The Quarterly Journal of Economics*, qjr026.
- Mamavi, O., Nagati, H., T. Wehrle, F., & Pache, G. (2014). Out of sight, out of mind? Supplier spatial proximity in French public procurement. *International Journal of Public Sector Management*, 27(6), 486-500.
- Mamavi, O., Nagati, H., Pache, G., & Wehrle, F. T. (2015). How does performance history impact supplier selection in public sector?. *Industrial Management & Data Systems*, 115(1), 107-128.
- McCrudden, C. (2004, November). Using public procurement to achieve social outcomes. In *Natural resources forum* (Vol. 28, No. 4, pp. 257-267). Blackwell Publishing Ltd..
- McKevitt, D., & Davis, P. (2015). How to interact, when and with whom? SMEs and public procurement. *Public Money & Management*, 35(1), 79-86.
- Raymond, J. (2008). Benchmarking in public procurement. *Benchmarking: An International Journal*, 15(6), 782-793.
- Reijonen, H., Tammi, T., & Saastamoinen, J. (2016). SMEs and public sector procurement: Does entrepreneurial orientation make a difference?. *International Small Business Journal*, 34(4), 468-486.
- Tammi, T., Saastamoinen, J., & Reijonen, H. (2014). MARKET ORIENTATION AND SMES'ACTIVITY IN PUBLIC SECTOR PROCUREMENT PARTICIPATION. *Journal of Public Procurement*, 14(3), 304.
- Uyarra, E., Edler, J., Garcia-Estevez, J., Georghiou, L., & Yeow, J. (2014). Barriers to innovation through public procurement: A supplier perspective. *Technovation*, 34(10), 631-645.
- Van der Burg, J. (2012). *Succesvol inschrijven op aanbestedingen*. Zaltbommel, The Netherlands: Haystack.

- Vyklický, M., Man, P., Heidt, R. F., & Jurčík, R. (2016). Qualification Requirements for Foreign Suppliers in Public Procurement—Evidence from the Czech Republic. *DANUBE: Law and Economics Review*, 7(1), 19-39.
- Weitz, B. A. (1981). Effectiveness in sales interactions: a contingency framework. *The Journal of marketing*, 85-103.
- Zhang, X. (2005). Critical success factors for public–private partnerships in infrastructure development. *Journal of construction engineering and management*, 131(1), 3-14.

Appendix

Appendix 1 – Interview protocol

Purpose of Interview: To discuss six cases with the interviewee concerning public sector bidding, three successful and three failed. For each case, questions will be asked regarding: the support customers sought, success or failure of the bid and company demographics. A question regarding competition in the market of tender support will be asked to gain an understanding of market dynamics. The bid breakdown will be used as a starting point for the type of support companies sought. Follow-up questions are devised on the basis of answers to the first questions. In addition to note taking by the interviewer, the interviews will also be recorded.

Interviewer:

Interviewee:

Company:

Case 1:(Duplicate per case)

Company name/industry/demographics:

Tender description:

Support sought/provided:

1. What support did the customer request?
2. Why did the customer want support?
3. What support was provided? See bid breakdown table. At which point and the kind of support.

Success/failure of bid:

Which strategies are effective?

Additional comment regarding case 1:

Please list your 5 main competitors (question for interviewee, not about cases):

Appendix 2 – Consent form
Informed consent form

Title research: Coping with public tenders: a supplier perspective
Responsible researcher: Thomas Nield

To be completed by the participant

I declare in a manner obvious to me, to be informed about the nature, method, target and [if present] the risks and load of the investigation.

I know that the data and results of the study will only be published anonymously and confidentially to third parties. My questions have been answered satisfactorily.

[If applicable] I understand that film, photo, and video content or operation thereof will be used only for analysis and / or scientific presentations.

I voluntarily agree to take part in this study. While I reserve the right to terminate my participation in this study without giving a reason at any time.

Name participant: _____

Company participant: _____

Date: _____ Signature participant: _____

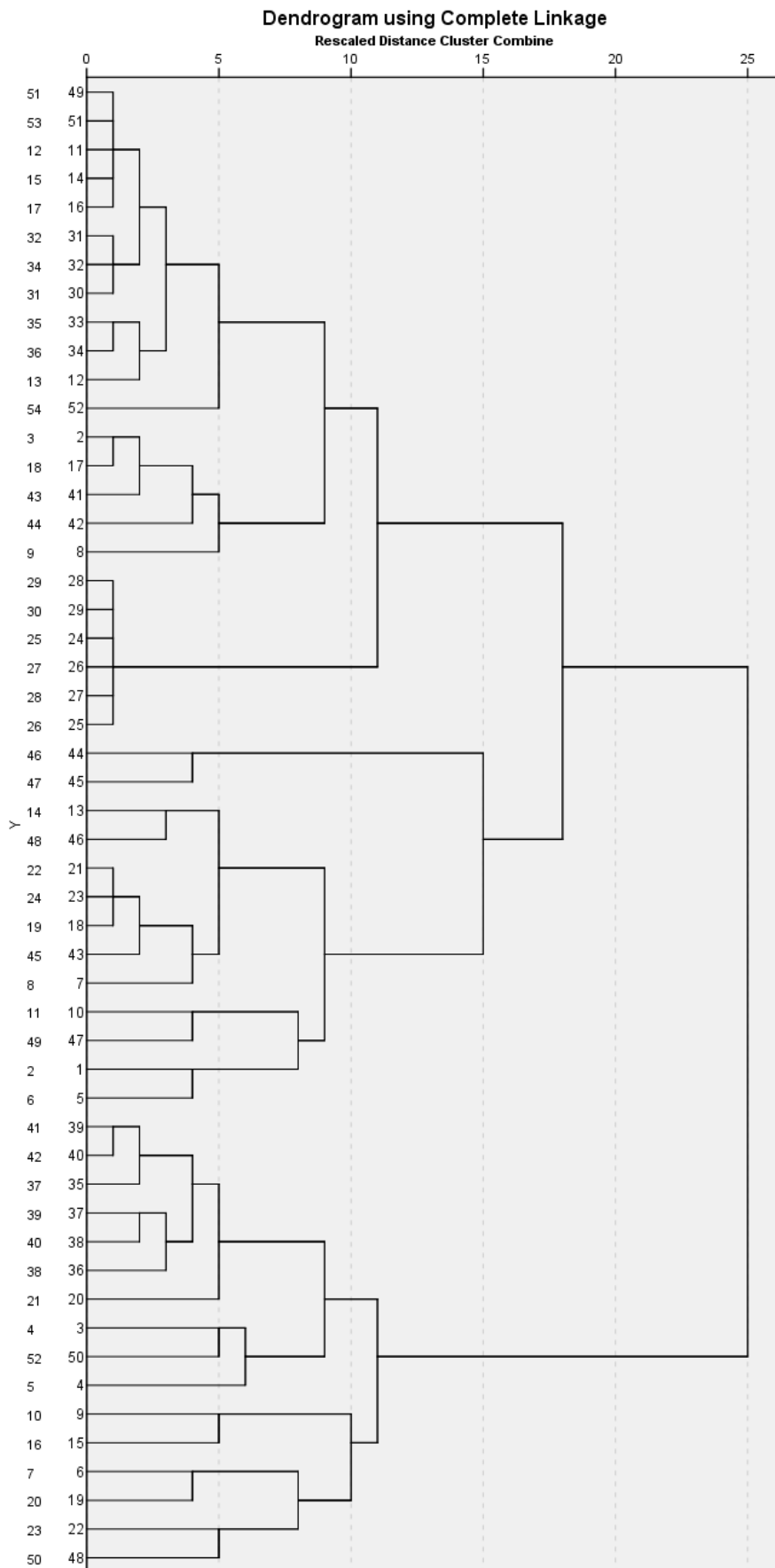
To be completed by the executive researcher

I have given a spoken and written explanation of the study. I will answer remaining questions about the investigation into power. The participant will not suffer any adverse consequences in case of any early termination of participation in this study.

Name researcher: _____

Date: _____ Signature researcher: _____

Appendix 3 – Dendrogram cluster analysis



Appendix 4 Chi-Square analysis

Nr.	Variable label	Direction	Chi-Square	p-value
0	Preliminary work	-	0.173	0.667
1	Finding tender announcements	-	<0.001	0.991
2	Assessing announcements	+	0.249	0.618
3	Requesting tender documentation	-	0.077	0.781
4	Assessing chances for successful outcome	+	0.321	0.571
5	Decision to bid	+	0.693	0.405
6	Form a project team	+	0.428	0.513
7	Creating a checklist	+	1.653	0.199
8	Gathering information	-/+	0.257	0.612
9	Asking questions	+	1.173	0.279
10	Writing draft bid	+	0.482	0.488
11	Reading answers and implementing them	+	2.080	0.149
12	Final decision to bid	+	0.551	0.458
13	Setting the price	-/+	0.056	0.812
14	Simulating competitor bids	-	0.006	0.938
15	Writing a “readable” bid	-/+	0.324	0.569
16	Writing of final bid	+	0.948	0.330
17	Submitting bid	-	0.028	0.866
18	Presenting of bid to tendering party	-	0.321	0.571
19	Bid outcome	-	0.010	0.918
20	Requesting evaluation	-	0.003	0.957
21	Objecting to bid outcome	-	0.428	0.513
22	Starting work for customer	X	XXXXXXXX	XXXXXXXX

Nr.	Variable label	Direction	Chi-Square	p-value
0	Preliminary work	-	1.005	0.316
1	Finding tender announcements	-/+	0.011	0.915
2	Assessing announcements	+	0.732	0.392
3	Requesting tender documentation	-	0.062	0.803
4	Assessing chances for successful outcome	+	0.697	0.404
5	Decision to bid	+	1.457	0.227
6	Form a project team	+	0.724	0.395
7	Creating a checklist	+	1.446	0.229
8	Gathering information	-/+	0.062	0.803
9	Asking questions	+	0.846	0.358
10	Writing draft bid	+	0.957	0.328
11	Reading answers and implementing them	+	1.697	0.193
12	Final decision to bid	+	0.305	0.581
13	Setting the price	-/+	0.015	0.903
14	Simulating competitor bids	-	0.030	0.862
15	Writing a “readable” bid	-/+	0.305	0.581
16	Writing of final bid	+	2.003	0.157

17	Submitting bid	-	0.230	0.631
18	Presenting of bid to tendering party	-	1.373	0.241
19	Bid outcome	-	0.024	0.877
20	Requesting evaluation	-	0.038	0.845
21	Objecting to bid outcome	-	1.906	0.167
22	Starting work for customer	X	XXXXXXXXX	XXXXXXXXX

Table 3 – Significance testing per variable in relation to success for tenderdesks

Nr.	Variable label	Direction	Chi-Square	p-value
0	Preliminary work	-/+	0.142	0.707
1	Finding tender announcements	-	0.008	0.929
2	Assessing announcements	-	0.052	0.819
3	Requesting tender documentation	-	0.062	0.803
4	Assessing chances for successful outcome	-	0.008	0.929
5	Decision to bid	-	0.008	0.929
6	Form a project team	-	0.008	0.929
7	Creating a checklist	-/+	0.944	0.331
8	Gathering information	-/+	0.944	0.331
9	Asking questions	-/+	0.944	0.331
10	Writing draft bid	-	0.032	0.858
11	Reading answers and implementing them	-/+	0.944	0.331
12	Final decision to bid	-/+	0.944	0.331
13	Setting the price	-/+	0.084	0.772
14	Simulating competitor bids	-/+	0.944	0.331
15	Writing a “readable” bid	-/+	0.084	0.772
16	Writing of final bid	-/+	0.084	0.772
17	Submitting bid	-/+	0.028	0.866
18	Presenting of bid to tendering party	+	0.476	0.490
19	Bid outcome	-/+	0.944	0.331
20	Requesting evaluation	-/+	0.944	0.331
21	Objecting to bid outcome	-/+	0.275	0.600
22	Starting work for customer	X	XXXXXXXXX	XXXXXXXXX

Table 4 – Results of logistic regression on bid factors

Bid factors	B	S.E.	p-value
Bid quality	-0.010	0.020	0.602
Relational capability	-0.022	0.016	0.149
Procedural capability	0.032	0.022	0.151