Small and medium procurement volumes in the Netherlands

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Small and medium procurement volumes in the Netherlands

Results of an explorative quantitative analysis

Delft University of Technology
Faculty of Architecture and the Built Environment
Chair of Public Commissioning
Supported by the Dutch Construction Client Forum

PREFACE

Public entities account for a large share of total construction volume, both in the Netherlands and abroad. The total construction volume consists of a variety of very small to large scale projects and activities, with the majority of the work being small maintenance and refurbishment work.

Within the chair of Public Commissioning in the Construction Sector, we investigate the role of public organisations as construction clients. We build knowledge to improve their professionalism, covering the full scope of their work.

Public entities are bound to European procurement law. The larger the project, the more preconditions as regards the procurement procedures to be followed. Regulations request publication of the tenders of large projects and contracts. In the Netherlands, TenderNed is the current platform for publishing public tenders. For smaller size contracts, this obligation to publish does not exist. The amount of data available on a national level on the nature, size and procurement processes used for smaller size projects is therefore substantially more limited than information available on large scale projects. This is also reflected in the number of literature – both academic and practice based - available on small size contracts; literature invariably focusses on larger scale projects.

Nevertheless, the market for small size contracts is substantially different from that of large scale projects, for instance due to the large amount of SME involved in those smaller size contracts. Furthermore, there are major differences between governance structures of large scale and small size projects, regarding authorisation structures. And, last but not least, the organisational characteristics such as amount of professional staff of small size public entities also differ substantially from that of large public entities. Therefore, investigating the professionalism of public entities in their procuring role also requires specific attention to the ins and outs of smaller scale contracts.

Earlier research within our chair revealed that the information within public organisations themselves on smaller size contracts is fairly limited. It is against this background that we started a research project to collect and combine data on small size contracts and their tender procedures in order to have a first impression on the nature and specifics of these contracts and tender processes as compared to larger scale contracts. The results of the research stress the importance for further, more systematic, data collection and attention for the professionalism within this specific part of the construction market.

We are very thankful to the Purchasing Office Netherlands Midst, Purchasing Office of South East Brabant, Architecture Local and TenderNed for their participation in this study in providing us with the data and accompanying support.

Prof.dr. Marleen Hermans

July 2017

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1 Introduction

As in other EU member states, in the Netherlands public tendering is mandatory for all publicly funded projects. The contract is being awarded based either on an economically most valuable offer (EMVI) or lowest price offer (LPI). Based on guidance on public tendering provided by the 'Guide for Proportionality' (Gids Proportionaliteit), projects that hare higher than €1.5 million in value have an obligation to be public and open to an EU-wide set of possible suppliers. The proportionality guide provides additional project value thresholds to categorise public procurements namely large (€150.000 - €1.5 million), medium (€50.000-149.999) and small (€0-49.999). Projects worth less than the EU threshold of €1.5 million for construction works can also be awarded based on tendering procedures that do not require openness to the public. The average value of Dutch public contract was estimated to be around €1 million in year 2012 (EIB, 2013), which indicates that most of the contracts are not publicly announced. Research that utilizes publicly available data (such as the one by Dutch Economic Institute of Construction (EIB)) is only looking at a small part of the market. This research focuses on a comparison between the contracts that are publicly announced and the ones that are not, based on a combination of datasets from (local) purchasing offices and knowledge-based institutions.

2 Aim and objectives

This research aims to verify whether the results and conclusions by EIB (2012 & 2013) still hold when including the private (onderhandse) tenders of organisations operating in the public construction domain. These tenders have a value up to €1.5 million. The study takes a look at how municipalities award small (€0-49.999) and medium (€50.000-149.999) sized contracts. Furthermore it takes into account the differences between new construction projects and maintenance/management contracts.

- Objective 1: To estimate the share of small and medium sized projects in the final dataset and to compare the findings to recent studies.
- Objective 2: To analyse the composition of small and medium sized projects based on their underlining characteristics.
- Objective 3: To verify whether the commission size thresholds correspond with the thresholds stated in the Guide for Proportionality.

3 Methods

The methods used in this research comprise descriptive statistics and statistical tests (ANOVA and t-tests) for the analysis of mean differences among various groups defined by the explanatory variables.

These explanatory variables are namely *contract value* in €, *award method* (EMVI/LP/IP), *tender procedure* (enkelvoudig & meervoudig onderhands (privately announced tenders) / openbaar / niet-openbaar / concurrentiegerichte dialoog (publicly announced tenders), *type of contract*, *type of commission* (new build or maintenance/management), *building type* (civic, residential, utility), *municipal project (yes/no) and procurement year (2013 or 2014)*. The latter has a large number of missing data.

The final dataset used in this analysis comprises of 583 tendered procurements registered during the years 2013 and 2014 obtained from different sources: Purchasing Office Netherlands Midst (IBMN), Purchasing Office of South East Brabant (Bizob), Architecture Local (ArchLokaal) and TenderNed (see Table 1 and Table 2).

Data sources
IBMN, Q1 and Q2 2014
Bizob, 2013 and 2014
ArchLokaal, 2013 and 2014
TenderNed, 2013 and 2014

Table 1: Data sources

	Municipal size*	Type of commission	Building type	Contract value in €	Tender procedure	Award method	Type of contract
IBMN	X	X	X	X	X	X	X
Bizob		X	X	X	X	X	
ArchLokaal	X	X	X	X	X	X	X
TenderNed	X	X	X	X	X	X	X

Table 2: Available data in sets

*Municipal size can be derived from the municipality that commissioned the tender

4 Analysis

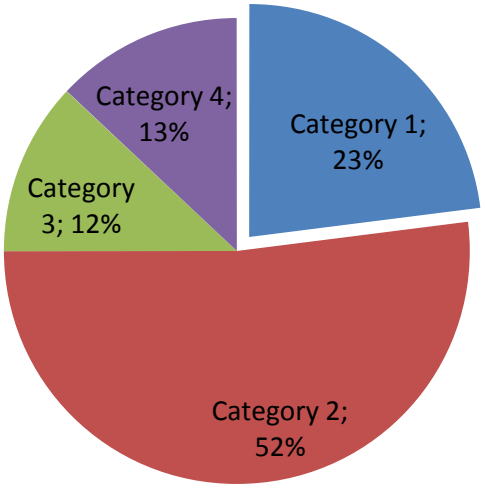
<u>Objective 1:</u> estimation of the share of small and medium sized projects in the final dataset and to compare the findings to recent studies

The graph in Figure 1 shows the distribution of the registered tenders in our database by category as below:

Category 1: €0 -149.999 (→ *the focus of this study*)
Category 2: €150.000 -1.499.999
Category 3: €1.500.000 -5.199.999
Category 4: €5.200.000+

The graph indicates that Category 1, which includes the contract types that represent the focus of this study, constitute 23% of the overall dataset. Category 1 consists of contracts with values from €0 up to €149.999 (small (€0-49.999) and medium (€50.000-149.999)). According to a study by the EIB (2012) the percentage of privately announced tenders (onderhandse aanbestedingen) was 17% in 2010 and 20% in 2011. So 23% would be in line with the trend of the past years.

***Figure 1**: Subdivision of all records in the dataset based on contract value*



<u>Objective 2:</u> Analysis of the composition of small and medium sized projects based on their underlining characteristics

With regard to descriptive statistics in the overall dataset, based on procurement year the data is divided equally. Additionally, 60% of the procurements are announced by municipalities (further subdivision by municipality size was not possible due to missing data) and overall EMVI type of awards are twice the size of LP (lowest price) ones (67% and 32% respectively). We analyse the general dataset based on year of procurement.

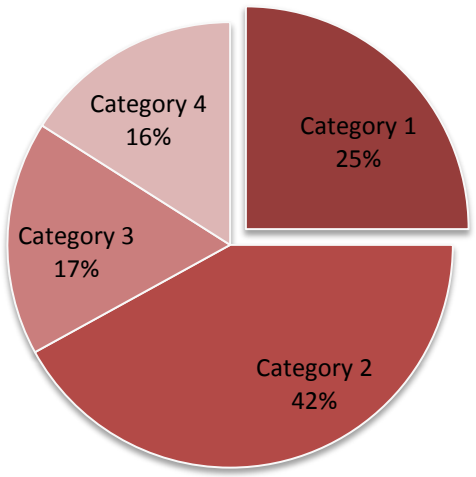
Year 2013 analysis

Of the projects procured during 2013, 67.6% (198 out of 293) were in the category works (w) with 74% belonging to municipalities. Based on the four monetary value categories these works were further subdivided as shown in the diagram below. As the graph (Figure 2) indicates, Category 1 procurements constitute a quarter of all works category projects procured during 2013. The latter do not show a large variation based on award type with 55% being awarded based on EMVI. Additionally, approximately 70% are new work and 30% maintenance. Overall, three quarters were awarded through public procedures and one third through private procedures.

In a more detailed analysis of the Category 1 works awarded during 2013 (*N*=48) we see that they are predominantly procured by municipalities (94%) mainly through private procedures (65%) with a slight dominance of lowest price (LP) type of awards (56%) over EMVI, and new projects (54%) over maintenance type ones.

In broader terms the picture for the categories 2-4 is slightly different. More explicitly, large and EU procurement project works awarded during 2013 (*N*=150) were generally announced by municipalities (67%) often through public procedures (73%). About 27% of the contracts used an restricted procedure where the average value of the contract was significantly (99% level) lower compared to the publicly procured ones. Here, the difference between the mean contract values of the two groups is very high (almost 23 times), a fact that we attribute to the overwhelming majority of the restricted tenders falling within value category 2. Additionally, a dominance of EMVI (59%) over LP type of award is observed and new projects comprise almost three quarters of the procurements (74%).

***Figure 2**: Subdivision of work projects awarded in 2013 based on contract value*



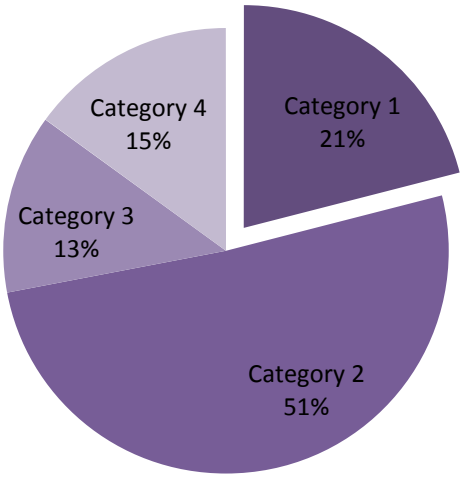
Year 2014 analysis

Of the projects procured during 2014, 56% (162 out of 290) were in the category works (w) with 71% belonging to municipalities. Based on the four monetary value categories these works were further subdivided as shown in the diagram below. As Figure 3 indicates, Category 1 procurements constitute 21% of all works category projects procured during 2014. The variation on award type is relatively lower than the previous year with 52% being awarded on a EMVI basis, 64% are new projects and only 30% are awarded through an open procedure. 70% has been awarded through a closed procedure.

For the Category 1 works awarded during 2014 (*N*=34) we see that they are mainly procured by municipalities (85%) predominantly through private procedures (74%). Almost three quarters of these projects (74%) are of maintenance type and are generally awarded on a lowest price (LP) basis (65%).

For categories 2-4 we see that the picture is similar to the one in the previous year. In more detail, large and EU procurement project works awarded during 2014 (*N*=128) were generally announced by municipalities (67%) with a slight dominance of public procedures (55%) that show a statistically significant (95% level) higher value (over 27 times) compared to the non-public procedure procurements. As in the case of year 2013 contracts we attribute this to the fact that the overwhelming majority of the restricted tenders falling within value category 2. Additionally, a dominance of EMVI (59%) over LP type of award and a high frequency of new projects comprising almost three quarters of the procurements (73%) was observed.

***Figure 3**: Subdivision of work projects awarded in 2014 based on contract value*



Objective 3: Verifying whether the commission size thresholds correspond with the thresholds stated in the Guide for Proportionality.

The Guide for Proportionality states that large tenders should be publicly awarded. Our data indicates that this is almost exclusively the case. In categories 3 and 4, for both years under investigation, more than 95% of the awarded contracts were through a public procedure[1]. The remaining part which was not tendered publicly showed a contract average value over 9 times lower than the publicly awarded contracts. We are aware that the small size of the non-publicly awarded contracts in categories 3 and 4 calls for a careful interpretation of the above finding (the statistical tests were inconsistent; hence inconclusive). However, the large difference in mean contract values requires further attention.

Statistical analysis (t-tests)

We use the t-tests to ascertain whether there are significant differences in the value of the contracts in the category of interest (Category 1: €0 -149.999 N=135) based on the variables outlined in the Methods section. A concise outcome of these tests is provided below and the detailed results are given in the Appendix.

We start with a general analysis with the overall dataset (N=583) to compare Category 1 to the rest:

As expected, the mean value of the contracts in category 1 is significantly different (lower) from that of all other categories (Category 1 average contract value = €85.731 other categories average contract value = €7.015.473).

A similar picture is observed with regard to the variable award method (EMVI/LP/IP) where contracts awarded on the basis of EMVI have a significantly higher value of €7.662.380 compared to €189.206 for the other categories.

There is no statistically significant difference between the mean contract values of the procured projects announced in year 2013 and year 2014.

There is no statistically significant difference between the mean contract values of contracts awarded through different procedure types (open/restricted).

EU projects have significantly higher average contract value than non-EU projects (€27.597.496 vs €2.185.247). These finding should be treated with care as the former category comprises only 13% of the whole dataset.

The second part of the t-tests analysis examines in detail Category 1 (N=135) for other variables outlined in the Methodology section.

[1] We did not provide this analysis on for each year (2013 and 2014) separately in order to preserve confidentiality due to the small number of observations in each resulting subcategory.

The analysis indicates that there is no statistically significant difference (at the 95% level) between the mean contract values for all categories/variables investigated above namely award method, year of award, procedure type (open/not-open),and procedure (EU/non-EU).

The latter variable reaches a somewhat considerable significance level (close to 95%). However, the findings should be treated with care as the procurement projects in category 1 awarded through a EU procedure comprise only 3% of the data in this subset.

5 Conclusion

From a comparative point of view this study indicates an accordance with general findings of previous studies from the EIB. The share of the small and medium project in our database is 23%. The detailed analysis of the dataset yielded the following conclusions.

Based on the value of the contracts there are no differences between the two years on which the tenders were announced (2013 and 2014).

Differences in mean contractual values are mainly evident in the whole dataset and are all as previously anticipated.

Large contracts (categories 3 and 4) are almost exclusively (in more than 95% of the cases) awarded through an public procedure (one that does not fall under the ‘onderhandse’ category). Here, the remaining portion of the contracts (awarded through the ‘onderhandse’ procedure) calls for further attention as the average contractual value showed large differences from the rest.

For Category 1 ‘works’ projects general contractual characteristics can be summarised as mainly procured by municipalities through private procedures and awarded on a lowest-price (LP) basis. There is a significant switch from new projects (54%) in 2013 to maintenance (74%) in year 2014 of category 1 works. The reason for this might also constitute a further research area.

Finally, we conclude that there are no significant differences in mean contractual values for the variables investigated in small and medium procured projects.

Appendices

General (complete dataset) analysis result (N=583)

Small contracts (Category 1) and the rest

Group Statistics

	contractwaarde_cat1	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	135	85731,57	38120,178	3280,863
	0	448	7015473,41	31565450,48	1491327,357

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	15,070	,000	-2,549	581	,011	-6929741,834	2718354,974	-12268741,7	-1590741,954
	Equal variances not assumed			-4,647	447,004	,000	-6929741,834	1491330,966	-9860632,482	-3998851,185

EMVI awarded projects and the rest

Group Statistics

	award_emvi	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	392	7662380,66	33659865,30	1700079,929
	0	191	789804,36	2614883,273	189206,313

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	19,718	,000	2,816	581	,005	6872576,295	2440187,096	2079913,550	11665239,04
	Equal variances not assumed			4,018	400,619	,000	6872576,295	1710576,159	3509749,289	10235403,30

Year of announcement

Group Statistics

	aankondiging_2014	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	290	4977467,18	32555652,32	1911733,730
	0	293	5839728,22	22203277,29	1297129,309

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	,178	,673	-,374	581	,709	-862261,041	2305910,033	-5391196,190	3666674,109
	Equal variances not assumed			-,373	509,477	,709	-862261,041	2310253,298	-5401056,666	3676534,585

Procedure type (open/not-open)

Group Statistics

	ProcedureOpen	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	423	7304114,15	32465501,87	1578526,718
	0	160	405409,78	538214,120	42549,562

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	17,617	,000	2,686	581	,007	6898704,367	2568129,188	1854756,259	11942652,48
	Equal variances not assumed			4,369	422,613	,000	6898704,367	1579100,081	3794836,041	10002572,69

Procedure (EU non-EU)

Group Statistics

	EUonly	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	74	27597496,36	68419587,85	7953615,532
	0	509	2185247,78	11476610,39	508691,812

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	122,402	,000	7,702	581	,000	25412248,59	3299454,707	18931936,61	31892560,56
	Equal variances not assumed			3,189	73,598	,002	25412248,59	7969866,209	9530503,082	41293994,09

Category 1 (small contracts) analysis results (N=135)

EMVI awarded projects and the rest

Group Statistics

	award_emvi	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	78	88779,83	39703,166	4495,498
	0	57	81560,28	35763,857	4737,039

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	,239	,626	1,088	133	,279	7219,548	6638,056	-5910,271	20349,366
	Equal variances not assumed			1,105	127,235	,271	7219,548	6530,623	-5703,147	20142,242

Year of announcement

Group Statistics

	aankondiging_2014	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	68	84625,16	34961,205	4239,669
	0	67	86854,50	41315,663	5047,512

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	3,159	,078	-,339	133	,735	-2229,344	6583,690	-15251,629	10792,940
	Equal variances not assumed			-,338	128,818	,736	-2229,344	6591,826	-15271,608	10812,919

Procedure type (open/not-open)

Group Statistics

	ProcedureOpen	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	75	90489,99	39279,061	4535,555
	0	60	79783,55	36062,654	4655,669

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	,641	,425	1,632	133	,105	10706,445	6562,039	-2273,014	23685,903
	Equal variances not assumed			1,647	130,450	,102	10706,445	6499,732	-2152,080	23564,970

Procedure (EU non-EU)

Group Statistics

	EUonly	N	Mean	Std. Deviation	Std. Error Mean
waardedefinitief	1	4	121975,75	24445,987	12222,993
	0	131	84624,88	37979,144	3318,253

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
waardedefinitief	Equal variances assumed	1,672	,198	1,950	133	,053	37350,868	19149,549	-526,198	75227,934
	Equal variances not assumed			2,949	3,458	,050	37350,868	12665,400	-97,710	74799,445

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