

PUBLIC PROCUREMENT PROCEDURES WHICH ATTRACT ONLY ONE BID

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INTRODUCTION

The objective of the EU public procurement directives is to increase the competition to increase efficiency and welfare (EU Commission 2011), by opening the award of public contracts to competition through transparency when the value of the contracts is sufficiently high, to outweigh the administrative burden of conducting a public procurement procedure. The exact value that triggers the obligation to tender depends on the buyer (contracting authority: state, local/body governed by public law), the object of the contract (goods, services, works), and the contract type.¹ In the 2011 impact assessment made in preparation for the proposal for the new public procurement directives, which were adopted in 2014, the Commission found that for 20 % of contracts advertised at EU level,² receipt of only one bid was reported in contract award notices by contracting authorities (EU Commission 2011). The motivation for conducting the study is that the receipt of only one offer indicates lack of competition for 20% public contracts advertised at EU level, which implies that the transparency efforts do not entail the desired increased level of competition, and hence the positive effects thereof (Cecchini report, 1988; European Parliamentary Research Service, 2014).

There are many reasons that might explain, why contracting authorities report that only one bid was received; an exhaustive list is difficult to construct, but a few examples could be provided. First, an award procedure such as negotiated procedure without prior publication of a contract notice, which is basically legitimized direct award of a contract where special grounds justifies the absence of

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competition, would seemingly obviously only attract one offer. Second, there may only be one interested economic operator due to e.g. geographic location of the fulfilment of the contract, language of the contract notice/tender terms or other language requirements, capacity constraints, attention to the contract notice etc. Third, the contracting authority may (on purpose) have posed (e.g. technical/language/timing) requirements that only one economic operator could fulfill. Fourth, the requirements posed in the contract notice or tender terms and conditions could make the contract unattractive to economic operators or make the contract seem unattainable (e.g. high quality/environmental/social requirements); an assessment of unattainability could also be based on the contracting authority's previous award patterns (e.g. history of award to the same economic operator). Fifth, economic operators may assess (e.g. from previous procurement outcomes or if the contracting authority has announced an estimated value/budget/ maximum price) that their costs of fulfilling the contract will be too high to win. Sixth, economic operators could have agreed (directly or indirectly) that only one particular economic operator should submit a bid (this could be based on the type of contract or on the identity of the contracting authority).

Since the reasons listed above are not easily detectable through the data available on EU level public procurement, the present study takes a descriptive and quantitative approach as a first step to understanding why the data show that some public procurement procedures only attract one offer. The study is based on data made available to researchers through *Tenders Electronic Daily*.³ There is no perfect measure of competition available in *Tenders Electronic Daily*, but in most cases the number of bids received for an awarded contract is reported. Even though such a number at most can be considered necessary – but not sufficient – to judge the degree of competition for a public contract, valuable knowledge might be derived from studying circumstances surrounding procurement procedures with a low number of submitted bids.

In Section 2, literature concerning low degrees of competition will be reviewed, in order to assess the theoretical basis for the measuring of competition on the basis of the number of bids. In Section 3, data and methodology is presented. In Section 4, a broad picture of the data is provided. In section 5, further examination of certain countries

and industries with low number of bids received. Section 6 contains some tentative conclusions and ideas for further research.

LITERATURE REVIEW ON FEW BIDS

Auction theory, including examples of auctions that resemble public procurement scenarios has historically, and is currently, intriguing economists. As there is a lot of work on this topic, only a few pieces have been selected for the review below. The criterion for selection has been how close the models are to a public procurement environment and the results regarding number of bids necessary to create (optimal/sufficient) competition.

In 1985, Samuelson modelled a situation with entry costs in the shape of bidding costs and found that reducing the number of tenderers could under certain circumstances improve welfare, compared to situations with “too many” tenderers. The argument was that the total costs of bidding would increase with the number of tenderers and that this cost, at least if the tenderers’ costs were similar, could not be outweighed by the reduction in price obtained by the buyer (the contracting authority). In 1987, Wilson et al. looked at the optimal number of tenderers from the contracting authority’s perspective. Based on a specific dataset from the construction sector, they distinguish between procedures similar to open procedures and procedures similar to restricted procedures. Regarding the former, they find that the average number of bids was lower than for the latter, and that attraction of only one bid solely occurs for open procedures in their sample. They conclude that four bids seem to be optimal regardless of the type of procedure. In 2002, Ngai et al. set out to determine the optimal number of tenderers to maximize competition for construction contracts. They assume that the number of potential competitors for a contract is a reflection of supply capacity utilization in the industry. They measure the degree of competition by the “likely number of potential competitors” and therefore the degree of competition will depend on market conditions (demand and capacity). The model constructed is based on a measure for market conditions that predicts the likely potential number of tenderers and – based on certain assumptions (e.g. that the choice of the tenderers invited to bid is random, which does not necessarily fit the EU public procurement regime so well) – allows determination of the minimum number of tenderers that with a high likelihood will produce the

lowest bid. Hence, there is no fixed minimum number of bids but the number will be more than one and depend on market conditions.

DATA AND METHODOLOGY

As mentioned above, in the present study, data from Tenders Electronic Daily (TED) is used. TED contains many different types of text documents from, Contract Notices (CN), Contract Awards (CA) over transparency notices to Contract Award Notices (CAN). Focus will be on the second and the last types, the contract awards and the contract award notices. In their original form, the CANs are text documents but information collected electronically is now available from two different sources: the EU Commission and also a group of researchers who have constructed a data base called OpenTED (See the WEB-page reference in the list of references). Each CAN may have more than one CA (e.g. if the contract is split in lots) and in both of the electronic data bases each CA observation will identify a *single* award and, hence, each CAN may be present more than once in the data set.⁴ Many of the variables in the two data bases are the same but there are exceptions. Only the data from the EU Commission contains an identifier variable for a framework agreement and for dynamic purchasing systems. In addition, the data from the EU Commission includes information dating back to 2009, whereas OpenTED starts in 2012; actually, at the end of January 2012.

In this study, data from the two sources are merged and OpenTED is regarded as the main data source, while the data from the EU Commission adds information on e.g. framework agreements. When the project was initiated, data from 2015 was still incomplete, thus it was decided to limit the study to data from the end of January 2012 until the end of 2014.

The data are delimited to contain CANs from all EU and EEA countries hence Norway, Liechtenstein and Iceland are added to the sample of the 28 EU countries. Switzerland is not an EEA country and therefore not part of our sample. The kind of variables that are available is: identity and type of the procuring authority, identity of the winners, the number of bids, the directive behind the CAN, the type of work, the type of procedure, the award criteria, the location of the unit of the CAN and the industry of the CAN classified by the EU CPV codes. In addition, a broader classification of type of field can be found.

Information on all these variables is not available for all CANs. In OpenTED, only documents that obey the standard structure of the documents with well-defined sections are included. When the TED documents are accessed online, there are some documents that do not obey to this structure (mainly related to EuropeAid – but not exclusively). These observations have been excluded from the dataset.

In an attempt to have a dataset with all potentially relevant data, selected variables (framework agreement indicator and indicator for a dynamic purchasing system, which are in reality contract types) were extracted from the EU Commission's data and merged with the OpenTED data. In case a document was contained in OpenTED but not in the EU Commission's data (which would prevent the merging), the observation was excluded from the final dataset.

Finally, it is worth stressing again that OpenTED contains no documents with a publication date prior to 31 January 2012. The first document in OpenTED has number 31450 and belongs to 31 January 2012. It has not been attempted to include documents with a number below 31450. The total number of CANs over the sample period is 452777 and the total number of CAs over the sample period is 1407772.

The Broad Picture

In Table 1, the number of CANs and CAs for the years 2012, 2013 and 2014 are provided. These numbers are extracted directly from the on-line version of TED.

TABLE 1
Number of CANs and CAs, 2012-2014

Year	2012	2013	2014
CANs	157,499	160,356	163,245
CANs in OpenTED data	141,303	159,521	161,272
CANs in OpenTED: (Only EU and EEA countries)	139,946	157,806	159,237
CANs in our study after being merged with EU Commission data	138,862	155,945	157,970
CAs in OpenTED	430,665	482,358	503,589

CAs in our study after being merged with EU Commission data	428,759	477,578	501,435
CAs in our study/ CANS in our study (no. of contracts per award)	3.09	3.06	3.17
CAs with missing number of bids	78,186 (18.3%)	87,656 (18.4%)	93,079 (18.6%)
CAs with number of bids equal to zero	1366 (0.3%)	1070 (0.2%)	600 (0.1%)
CAs with numbers of bids equal to 1	87,798 (20.5%)	97,612 (20.4%)	102,999 (20.5%)
CAs with number of bids larger than 1	261,409 (61.0%)	291,240 (61.0)	304,757 (60.8)

Note: Remember that not all of 2012 are covered in OpenTed. OpenTed starts on 31 January 2012.

The unit of analysis for the analyses below is the CAs which provide information of number of bids and hence some indication of the level of competition. The overall impression from Table 1 is a small increase in the number of CANS; the number of CAs increases more compared to CANS, but not consistently. The variation in CAs depends on the extent to which contracts are divided into lots⁵ or how many economic operators are allowed onto framework agreements.

In the following, focus is on the information that concerns the competition for each contract award. The EU Commission has chosen to focus on the average number of bids per contract and states that in general the competition seems satisfactory from the point of view of the EU Commission if the average is high. They observe, however, that in almost 20% of the cases only one bid was registered (EU Commission 2011). The data in Table 1 reproduces this finding by the EU Commission and clarifies that the observation is made at CA level; i.e. for 20 % of CAs there is only one registered tender. In addition, it is worth noticing that the share of CAs with *just one tender* and the share of CAs with *more than one tender* seem to be very stable.

When taking a closer look at the CAs that signals no (actual) competition it may, first, be observed that a limited number of CAs have attracted zero offers. Later in the study, these observations will be disregarded as zero offers must imply that no winner was found; and, hence, no contract was awarded.

At the moment they are kept as a separate category in the tables. Second, it may be observed that data on number of bids is missing for a high and stable proportion of the CAs (18 %). For the majority of these observations (92%), a winner is identified in the CA, indicating that the missing information is more likely to have just been left out. As it is not clear how many offers were received, and hence the measure used to assess competition is not available, these observations are also disregarded later, although for the moment they are kept as a separate category in the tables.

Third, the distribution of number of bids amongst the countries can be considered. In total, 31 countries are included in the sample, thus it was decided not to include all countries. All years were collected into a single sample, and some of the countries that show patterns of interest are displayed in Table 2. There are large differences amongst the countries and the purpose of Table 2 is solely to provide an overview.

TABLE 2
Distribution of Number of Bid Categories by Country

Country	Missing	0 bids	1 bid	More than 1	Total CAs
France (FR)	38.4%	0.2%	9.5%	52.0%	350,847
Poland (PL)	3.5%	0.0%	44.4%	52.1%	357,998
Germany (DE)	17.2%	0.4%	10.1%	72.3%	102,068
UK	18.1%	0.1%	4.6%	77.3%	94,103
Italy (IT)	30.7%	0.7%	19.2%	49.5%	56,699
Spain (ES)	42.6%	0.2%	10.7%	46.6%	52,397
Romania (RO)	0.1%	0.0%	18.9%	81.1%	61,646
Bulgaria (BG)	1.8%	0.0%	23.4%	74.9%	32,040
Denmark (DK)	29.4%	0.0%	5.0%	65.0%	15,609
Total CAs in the table					1,123,047
Total – also countries not in the table	18.4%	0.2%	20.5%	60.9%	1,407,772

The countries selected for Table 2 are the larger countries in terms of number of CAs and Denmark (due to origin of the authors). If focusing on the column showing the percentage of contract awards

that attract only one offer for a country, quite large differences may be observed. Actually, there seems to be groups of countries around different levels of percentages of contract awards that attract only one bid. Moving outside the scope of Table 2, countries like Denmark, Germany, Spain, Finland, France, Ireland, Iceland, Liechtenstein, Luxembourg, the Netherlands, Norway, Portugal, Sweden and the UK have percentages around 10 and below, while Austria, Belgium, Czech Republic, Estonia, Greece, Italy, Lithuania, Latvia, Malta, Romania, Slovenia and Slovakia have between 13 and 16%. A few countries stand out from the rest with very high percentages of contract awards attracting just one bid: Croatia, Hungary and especially Poland. For Poland the combination of a very high one-tender percentage of 44.4 and a very large number of contract awards points towards a case that deserves more attention.

In order to describe the contract awards that attract only few bids, in the following other variables are matched with number of bids.

Applicable Directive and Contract Objects

In this section, the applicable directive is matched to the number of offers received in the procurement procedure (see Table 3).

TABLE 3
Distribution of Number of Offers by Directive

Directive/ no. bids	Missing	0	1	More than 1	Total CAs
2004/17	24.1%	0.1%	18.3%	57.6%	44,677
2004/18	18.2%	0.2%	20.5%	61.0%	1,358,870
2009/81	20.7%	0.2%	27.9%	51.2%	4,225
Total CAs	258,921	3,036	288,409	857,406	1,407,772

Note: 2004/17 is the Utilities Directive; 2004/18 is the Public Sector Directive and 2009/81 is the Defence Directive.

A test for similar distributions clearly reject this hypothesis supporting the visual impression from Table 3 which is that, clearly, more contracts within the scope of the Defence Directive attracts only one offer. There could be several reasons for this, one being that

technical specifications are drawn up in a manner restricting competition.⁶

A cross tabulation of number of bids against the type of contract shows the results provided in Table 4.

TABLE 4
Distribution of number of bids by contract object

Contract object	Missing	0	1	More than 1	Total CAs
Services	18.5%	0.2%	18.8%	62.5%	483,277
Supplies	17.0%	0.2%	24.3%	58.5%	778,887
Works	25.4%	0.3%	5.7%	68.6%	145,658
Total CAs	258,921	3,036	288,409	857,406	1,407,772

The general picture from Table 4 is that procurement procedures that only attract one offer is most prevalent for procurement of supplies.

A note must be made on the use of framework agreements as well. Closer analysis of the data revealed that: of all the CAs where the procurement attracted only one offer, 11% was explicitly indicated to concern the award of a framework agreement.⁷ However, of all the CAs where the procurement attracted more than one offer, 27% was explicitly indicated to concern the award of a framework agreement. This could imply that the award of a framework agreement attracts more competition.

Contracting authorities

The standard form for CANS⁸ under the Public Sector Directive has seven types of contracting authorities: “Ministry or any other national or federal authority, including their regional or local sub-divisions”; “national or federal agency/office”; “regional or local authority”; “regional or local agency/office”; “body governed by public law”; “European institution/agency or international organization”; and, “Other”. For some reason, these categories do not match the categories of the Public Sector Directive, which are: “State, regional or local authorities, bodies governed by public law, associations formed

by one or several of such authorities or one or several of such bodies governed by public law.”⁹ The addition of “national or federal agency/office” and “regional or local agency/office” to the CAN does not relate to statistics, as the regulation on statistics does not mention these categories.¹⁰ A small test sample from the dataset shows a lack of consistency in choice of categories by contracting authorities. Hence, it was decided to merge the categories: “Ministry or any other national or federal authority, including their regional or local sub-divisions” and “national or federal agency/office” as well as the categories “regional or local authority” and “regional or local agency/office”. A cross tabulation of number of bids against contract authority type is provided in Table 5.

TABLE 5
Distribution of Bids by Contract Authority Type

Contracting authority/no. of	Missing	0	1	More than 1	Total CAs
European Institution/Agency	10.7%	0.0%	20.0%	69.3%	270
National level authority	13.2%	0.3%	19.3%	67.3%	144172
Regional or local	20.3%	0.3%	14.0%	65.5%	340738
Utilities	24.0%	0.1%	18.3%	57.6%	44732
Body governed by public law	12.5%	0.2%	26.0%	61.4%	445912
Other	14.8%	0.1%	26.2%	58.9%	294513
Not specified	44.3%	0.6%	8.6%	46.6%	137435
Total CAs with mentioned bid	258,921	3,036	288,409	857,406	1,407,772

Apparently, ‘National or Federal Agency/Office’ and the ‘European Institution/Agency or International Organisation’ categories attract the highest percentage of “more than one bid”, while the categories ‘Body governed by public law’ and ‘other’ have the highest percentages of only “one bid”.

However, the differences are not remarkable. An explanation for the variation might be that the former categories are European or national entities, whereas the former categories might be more local.

Type of Procedure

The literature review in section 2 revealed amongst other the hypothesis that the number of bids could be related to the choice of procedure made by the contracting authority; it was suggested that restricted procedures would attract more bids than open procedures. It would also intuitively seem justified to expect that use of negotiated procedure without prior publication of a contract notice (i.e. direct award) would always only be registered with one bid. Below, in Table 6, a cross tabulation of number of bids against type of procedure is provided.

TABLE 6
Number of Bids Distributed By Procedure

Procedure/no. of bids	Missing	0	1	More	Total CAs
Open procedure	17.4%	0.2%	20.5%	61.9%	1204981
Restricted procedure	17.4%	0.1%	6.8%	75.8%	64243
Accelerated restricted procedure	8.2%	0.4%	24.7%	66.8%	5291
Negotiated procedure	28.5%	0.2%	11.8%	59.6%	39926
Accelerated negotiated procedure	39.9%	0.7%	29.6%	29.9%	3004
Competitive dialogue	17.1%	0.0%	9.9%	73.0%	2199
Negotiated without a call for competition	26.3%	0.1%	55.7%	17.9%	34170
Award of contract without prior publication of a contract notice	25.4%	0.1%	22.9%	51.7%	48469
Not specified	55.9%	4.9%	6.2%	33.0%	5489
Total	258,921	3,036	288,409	857,406	1,407,772

The numbers give rise to several comments. First, the difference between the part of CAs that only attracted one offer in open (20.5%) and restricted (6.8%) procedures, respectively, could be taken to support previous studies (section 2). Second, around 25 % of the accelerated procedures only attract one bid, which is quite intuitive as shorter time limits apply. Third, use of the negotiated procedure without prior publication of a contract notice expectedly attracts only one bid most of the cases, albeit not 100 % as might be expected. It must be noted in this context, that the number of bids is missing in more than 25 % of the CAs which are made under this procedure. If the missing number of bids is indicating that only one bid was received (which is not an unreasonable assumption giving the character of the procedure), more than 70% of the CAs only attract one bid which is closer to the expected. An explanation for the 17-18 % of CAs where more than one bid has been received under the negotiated procedure without prior publication might be that the procedure applies amongst others: a) where no suitable bids have been received in response to an open or restricted procedure, implying that more than one economic operator might have shown interest; b) where situations of extreme urgency arises, implying that it is possible to informally ask more than one economic operator to submit a bid; c) where certain contracts for R&D are awarded and hence, more economic operators could be approached.¹¹ Fourth, if CAs indicate that the contract is awarded without prior publication of a contract notice, it might e.g. be for Annex II B services, which formally are outside the scope of the Public Sector Directive, but where the directive requires CAs to be published subsequent to the award.¹²

Industry

An indicator of the industry (which may also be perceived as a more detailed categorisation of contract object) is provided by the CPV-codes. The CPV- codes are organised in 8 digits with increasing level of detailed description of the contract object. The contracting authority should use the level of digits that most closely described the contract object to make it possible for potential tenderers to quickly assess whether the advertised contract is within their sphere of interest. Often, each CAN has several CPV-codes to describe the contract object, the two digit CPV code used in this study is the CPV code categorized as the “primary” CPV code in OpenTED. In Table 7, a

cross tabulation of number of bids against two digit CPV-codes is provided.

TABLE 7
Distribution of Bids by Selected 2 Digit CPV Codes.

2 digit CPV/ no. of bids	Missing	0	1	More than 1	Total CAs
33	15.6%	0.2%	27.9%	56.3%	473,909
34	17.0%	0.8%	20.1%	62.2%	41,536
38	12.0%	0.2%	41.1%	46.7%	25,091
50	20.6%	0.5%	20.7%	58.3%	42,582
60	28.3%	0.1%	12.8%	58.8%	45,260
66	18.9%	0.3%	19.9%	61.0%	30,277
79	18.2%	0.1%	12.9%	69.0%	49,710
80	12.1%	0.4%	41.3%	46.3%	44,069
85	19.5%	0.2%	21.0%	59.4%	27,966
90	17.4%	0.2%	12.8%	69.6%	62,036
Other	20.7%	0.2%	13.9%	65.2%	565,336
Total CAs	258,921	3,036	288,409	857,406	1,407,772

Note: **33**- Medical equipments, pharmaceuticals and personal care products; **34**- Transport equipment and auxiliary products to transportation; **38**- Laboratory, optical and precision equipments (excl. glasses); **50**- Repair and maintenance services; **60**- Transport services (excl. Waste transport); **66** - Financial and insurance services; **79** - Business services: law, marketing, consulting, recruitment, printing and security; **80** - Education and training services; **85** - Health and social work services; **90** - Sewage, refuse, cleaning and environmental services.

In particular, three sectors stand out: **33** - Medical equipments, pharmaceuticals and personal care products; **38**- Laboratory, optical and precision equipments (excl. glasses); and, **80** - Education and training services.

As these specific sectors seem to generally being exposed to low numbers of bids; in the following, it is examined whether the picture is similar or very varied for the Countries.

Countries and sectors – a closer look

In the following sections focus is solely at CAs that attracted only one bid (implying that missing and zero bids are henceforth not included in the data). The intention is to find common characteristics of these CAs. First, the geographical distribution of CAs that attracted only one bid (same selection of Countries as in section 4, Table 2) is considered in the context of the relevant sectors in order to find out whether certain sectors are more exposed to one bid competition for public contracts. Second, the sectors which are more exposed in the selected Countries (section 4, Table 2) are narrowed down by considering a greater detail of information available from the CPV-codes; instead of the 2 digit survey in Table 7 and Table 8 (below), we examine the 4 digit CPV-codes to gather whether any more details may be revealed about the sectors where only one bid is submitted when public contracts are advertised for competition.

Contract awards that attract only one bid – selected countries, which sectors?

In Table 8, the distribution of two digit CPV-codes across countries is presented. The table shows two digit CPV-codes where at least *one* of the selected countries (the same selection as in Table 2) has a percentage of at least 5.

All the selected countries have percentages above 5 in two digit CPV 33 (Medical equipments, pharmaceuticals and personal care products) but even within this two digit CPV the percentages for each country vary quite a lot. The highest percentages are observed for Poland and Romania. Countries like the UK, France and Germany have much lower percentages. For the rest of the CPVs, in Table 8, top 3 has been highlighted – if CPV 33 was in top 3, an additional CPV code has been highlighted. It shows that mostly only two or three of the countries show values of above 5% for the other CPV codes; moreover, several countries have the same CPV codes in top 3. There are, however, some individual cases of high percentages (CVP 50 for Germany, CPV 60 for the UK, CPV 66 for IT and the UK, CPV 80 for Poland, CPV 85 for the UK and CPV 90 for Denmark).

TABLE 8
Distribution of 2 Digit CPV Industry by Country (In %)

CPV	Country									
	BG	DE	D	ES	FR	IT	PL	RO	UK	Other
33	44.6	10.6	25.0	19.9	11.8	41.0	62.8	52.5	8.4	26.1
34	4.3	14.0	5.6	4.5	6.4	4.0	1.0	2.6	2.4	3.9
38	1.9	7.3	6.3	4.2	1.7	3.1	3.3	2.1	4.5	5.8
50	6.5	2.2	1.6	7.1	5.2	3.6	1.8	5.6	4.3	4.2
60	2.0	5.1	1.8	7.4	5.8	2.5	0.5	0.9	17.2	2.1
66	1.4	0.5	5.9	1.9	3.8	12.4	1.0	1.3	10.0	2.1
79	4.5	1.8	3.9	4.9	3.6	1.8	1.2	2.6	6.0	3.6
80	0.8	1.4	1.6	0.5	4.3	1.2	9.5	0.3	2.8	2.6
85	1.9	1.4	0.9	1.8	1.5	4.6	1.8	2.3	10.6	2.1
90	2.6	4.0	12.3	3.9	5.3	5.8	1.8	2.4	2.1	3.1
Other	29.6	51.7	35.1	44.0	50.4	20.1	15.4	27.4	31.7	44.5
Tota	7,487	10,320	877	5,589	33,310	10,856	159,101	11,630	4,288	44,951

Notes: **33**- Medical equipments, pharmaceuticals and personal care products; **34** - Transport equipment and auxiliary products to transportation; **38** - Laboratory, optical and precision equipments (excl. glasses); **50** - Repair and maintenance services; **60** - Transport services (excl. Waste transport); **66** - Financial and insurance services; **79** - Business services: law, marketing, consulting, recruitment, printing and security; **80** - Education and training services; **85** - Health and social work services; **90** - Sewage, refuse, cleaning and environmental services.

CPV 33 - Medical equipments, pharmaceuticals and personal care products

Below, in Table 10, a higher level of detail concerning the contract objects under CPV-code 33 is provided. The dataset is thus narrowed down to CAs for CPV-code 33 objects advertised by the selected countries that have attracted one bid.

TABLE 10
Distribution of 3 Digit CPV Industry by Country (In %)

CPV/ Country	BG	DE	DK	ES	FR	IT	PL	RO	UK
330	3.6	1.8	4.5	4.4	3.7	12.6	3.1	0	2.2
331	32.3	23.0	85.8	34.7	28.2	61.2	47.3	30.0	56.4
336	63.8	75.0	3.2	59.4	66.8	23.5	49.2	69.9	40.8
337	0.2	0.2	6.4	1.0	0.8	1.7	0.4	0.1	0.3
339	0	0	0	0.5	0.5	1.0	0	0	0.3

Note: **330** - Medical equipments, pharmaceuticals and personal care products; **331** - Medical equipments; **336** - Pharmaceutical products; **337** - Personal care products; **339** - Post-mortem and mortuary equipment and supplies.

Clearly, Table 10 shows that the CAs for CPV 33 receiving one bid centers around two three digit items: medical equipments and pharmaceutical products. These categories are still very general and further scrutiny might reveal that certain categories of medical equipments and pharmaceutical products is exposed to less competition than others (measured on the prevalence of CAs with one bid only). If CPV 331 and 336 are detailed to four digit CPV, the picture is more scattered, but the four digit CPV-codes with a percentage higher than 5 % is depicted below in Table 11 across countries.

The rows coloured in light grey are the general categories; that these CPV- codes have high percentages simply shows that very general categories were provided as the primary CPV-code in the CA; it does not rule out that additional and more detailed CPV-codes occur. The increase in information may be extracted from the other four digit CPV-codes. There are some individual countries which as the only or one of few of the selected countries have high percentages for certain four digit CPV-codes (e.g. CPV 3300 for IT; CPV 3319 for DK and IT; and, CPV 3365 for Romania). More generally, all countries (except DE) have high percentages in CPV 3314 which is “medical consumables”,

TABLE 11
Distribution of 4 Digit CPV Industry by Country, 5% Threshold (In %)

CPV/ Country	BG	DE	DK	ES	FR	IT	PL	RO	UK
3300	-	-	-	-	-	12.6	-	-	-
3310	-	7.9	-	-	5.9	-	6.3	-	5.8
3311	-	5.4	13.7	-	-	-	-	-	-
3312	-	-	-	-	-	6.0	-	-	-
3314	24.8	-	29.2	16.7	9.7	13.4	22.7	13.8	27.5
3318	-	-	-	9.4	5.0	10.0	9.0	6.1	-
3319	-	-	20.5	-	-	22.9	-	-	10.0
3360	51.6	68.9	-	21.9	43.5	-	30.7	10.5	31.4
3365	-	-	-	9.6	5.5	-	-	16.6	-
3369	10.6	-	-	27.1	14.9	15.4	12.3	33.9	5.8

Note: **3300** - Medical equipments, pharmaceuticals and personal care products; **3310** - Medical equipments; **3311** - Imaging equipment for medical, dental and veterinary use; **3312** - Recording systems and exploration devices; **3314** - Medical consumables; **3318** - Functional support; **3319** - Miscellaneous medical devices and products; **3360** - Pharmaceutical products; **3365** - General anti-infectives for systemic use, vaccines, antineoplastic and immunodulating agents; **3369** - Various medicinal products.

e.g. bandages, plasters, catheters, certain needles, various blood products etc. This could be considered peculiar, as this type of products would apparently be sold by a number of economic operators and across borders.

High percentages for most of the selected countries (except DK and IT) are also showing for CPV 3369, which is the similarly broad category “various medicinal products”, e.g. various solutions, fluids, reagents etc. Some of these products could be strictly complimentary to specific (brands of) equipment used in hospitals etc., which might in some cases explain the lack of competition – e.g. because the distribution of the products is organised as selective distribution (la

Cour, Ølykke and Milhøj 2015, 186). Further levels of CPVs might reveal whether more specific CPV codes show high percentages. Moreover, a closer look at the industries involved (which is outside the scope of this paper) might give more information about why in many cases only one bid is submitted for the award of contracts for these products.

CPV 3314 and 3369

Due to the possible relevance of procurement procedure type for the level of competition, the type of procurement procedure used to buy products in CPV 3314 and 3369 will be closer scrutinized and comparison is made to the procurement procedures applied for these products, where more than one bid was submitted (Table 13).

It is clear that the open procedure was used in the overwhelming majority of cases where only one bid was received for the procurement of CPV 3314 in all of the selected countries. However, some country variety shows: in particular, the UK and IT are also using the restricted procedure (21.2 % and 6.35 %, respectively) and FR, DE and ES are using the negotiated procedure without prior publication of a contract notice (16.8 %, 10 % and 8.6 %, respectively). To examine whether the choice of procedure is important, the same numbers are produced below in Table 14, for situations where more than one bid was attracted for procurement of CPV 3314.

TABLE 13
CPV 3314, One Bid Received Divided on Countries and Procedures

Procedure/country	BG	DE	DK	ES	FR	IT	PL	RO	UK	Weighted average
Open procedure	98.8 %	70.0 %	98.4 %	82.8 %	81.4 %	91.0 %	99.6 %	99.2 %	77.8 %	98.8 %
Restricted procedure	-	-	1.6 %	-	-	6.4 %	0.2 %	-	21.2 %	0.4 %
Accelerated restricted procedure	-	-	-	-	-	0.3 %	-	-	-	-
Negotiated procedure	-	10.0 %	-	2.2 %	0.3 %	-	-	-	-	-
Accelerated negotiated procedure	-	-	-	-	-	-	0.1 %	-	-	0.1 %
Negotiated without a call for comp.	0.2 %	10.0 %	-	8.6 %	16.8 %	2.4 %	0.2 %	0.8 %	1.0 %	0.5 %
Award without prior contract notice	-	10.0 %	-	6.5 %	1.6 %	-	-	-	-	0.1 %
Total Cas for CPV 3314 with only one bid	829	10	64	186	381	597	22737	845	99	25748

TABLE 14
CPV 3314, More Than One Bid Received Divided on Countries and Procedures

Procedure/country	BG	DE	DK	ES	FR	IT	PL	RO	UK	Weighted average
Open procedure	100%	86,4%	98,9%	100%	96,6%	93,5%	99,7%	96,1%	72,6%	98,8%
Restricted procedure	-	-	-	-	-	5,7%	0,2%	-	27,4%	0,6%
Accelerated restricted procedure	-	-	-	-	-	0,5%	-	-	-	-
Negotiated procedure	-	13,6%	-	-	0,2%	-	-	-	-	0,1%
Accelerated negotiated procedure	-	-	-	-	-	-	0,1%	-	-	-
Negotiated without a call for comp.	-	-	-	-	-	-	-	3,9%	-	0,3%
Award without prior contract notice	-	-	1,1%	-	3,2%	0,2%	-	-	-	0,1%
Total Cas for CPV 3314 with more than one bid	430	44	93	242	473	561	9047	800	106	11796

On comparison, it appears that the pattern in use of the procedures is more or less the same where CPV 3314 has been procured and the call for tenders attracted just one or more than one tender, respectively: the open procedure is used in all cases by contracting authorities in the selected countries. Hence, at the face of it, the choice of procedure is not decisive for the level of competition. Below in Tables 15 and 16, the same calculations are made for CPV 3369, to check if the same pattern shows

TABLE 15
CPV 3369, One Bid Received Divided On Countries and Procedures

Procedure/country	BG	DE	DK	ES	FR	IT	PL	RO	UK	Weighted average
Open procedure	98.9 %	94.4 %	100 %	58.6 %	92.2 %	91.2 %	99.3 %	97.4 %	23.8 %	97.6 %
Restricted procedure	-	-	-	-	-	1.3 %	-	-	42.9 %	0.1 %
Accelerated restricted procedure	-	-	-	-	-	0.5 %	0.1 %	-	4.8 %	0.1 %
Negotiated procedure	0.3 %	-	-	0.3 %	1.0 %	-	-	-	-	0.1 %
Negotiated without a call for comp.	0.9 %	5.6 %	-	39.1 %	4.4 %	7.3 %	0.5 %	2.6 %	23.8 %	2.0 %
Award without prior contract notice	-	-	-	2.0 %	2.0 %	0.2 %	0.1 %	-	4.8 %	0.2 %
Total CAs for CPV 3369 with one bid	355	54	1	302	473	685	12264	2068	21	16338

TABLE 16
CPV 3369, More Than One Bid Received Divided on Countries and Procedures

Procedure/country	BG	DE	DK	ES	FR	IT	PL	RO	UK	Weighted average
Open procedure	98.8 %	100 %	100 %	100 %	99.7 %	98.7 %	99.9 %	97.0 %	68.8 %	99.5 %
Restricted procedure	-	-	-	-	-	1.3 %	-	-	18.8 %	0.1 %
Accelerated restricted procedure	-	-	-	-	-	-	0.1 %	-	-	0.1 %
Negotiated procedure	-	-	-	-	0.2 %	-	-	-	6.3 %	-
Competitive dialogue	-	-	-	-	0.2 %	-	-	-	-	-
Negotiated without a call for comp.	1.5 %	-	-	-	-	-	-	3.0 %	-	0.3 %
Award without prior contract notice	-	-	-	-	-	-	-	-	6.3 %	-
Total CAs for CPV 3369 with more than one bid	198	77	1	113	566	522	6986	953	16	9434

On the basis of Tables 13 and 15, it appears that the open procedure is used in the majority of procurements for both CPV 3314 and 3369, where only one bid is received, as well as where more than one bid is received. However, it must be noted that for these specific contract objects, more than 60 % of the CAs only attract one tender (far from the general 20 %). At this very general level, a hypothesis could be that contract objects covered by CPV 3314 and 3369 are not very fit for public procurement, as in the majority of cases, only one tender is received. However, many other explanations competes with this statement, and without an even more detailed analysis of the data, it is difficult to say whether the lack of bids is on one or a few specific contract items or more generally divided on the subcategories of CPV 3314 and 3369; whether the technical specifications in the contract notices that attract only one tender is designed in that way and the choice of the open procedure is to give the illusion of competition or whether the structure of or behavior on the market is the cause for limited competition.

CONCLUSIONS

The research in this paper was spurred by the Commission's finding that 20 % of all CAs published at EU level only attracts one bid. The purpose of the research was to identify characteristics of the CAs that might explain the low number of bids and thereby provide ideas for further research. The ultimate end of future research would be to identify problem-sectors or problems on certain markets (behavior) and to identify geographical/authority level/procedural characteristics that could be used to identify potential one-bid procurement so the lack of competition could be addressed more targeted.

However, it should not be neglected that potential competition is an important discipliner in public procurement; hence, receiving only one bid is not necessarily directly related to complete absence of competitive pressure. But it might be, especially if the procurement is designed to fit one tenderer or if the lack of bids is due to anti-competitive behavior in the market.

Whereas the research has not yet been sophisticated to a sufficient degree in order to provide answers with the desired detail or validity, it has been confirmed that the procurement of medical equipment faces certain challenges at EU level which confirms earlier

results (la Cour, Milhøj and Ølykke, 2015). Future research could e.g. look into the nationality of the tenderers awarded contracts, the design of the tender terms and conditions that are advertised at EU level, and include market information.

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NOTES

1. On threshold values; see Article 16 of Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, OJ 2004 L 134/1 (henceforth: Utilities Directive); Article 7 of Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, OJ 2004 L 134/114 (henceforth: Public Sector Directive); Article 8 of Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC, OJ 2009 L 216/76 (henceforth: Defence Directive). In the new Public Procurement Directives from 2014, differences in thresholds are generally the same, but two new distinctions are added. First, contracts for services covered by the light regime has a higher threshold than contracts for other services, cf. Article 4 of Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC, OJ 2014 L 94/65 (henceforth: 2014 Public Sector Directive). Second, there is a higher threshold for concession contracts covered by Directive 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts, OJ 2014 L 94/1; see Article 8 therein.

2. Only 25 % of public procurement is advertised at EU level on the basis of value, numbers are for 2012-2014; see Table 7 in Public Procurement Indicators (2014). [Online]. Available at http://ec.europa.eu/growth/single-market/public-procurement/studies-networks/index_en.htm accessed February 2016.
3. Thanks to the Commission for making the data available.
4. On the basis of Table 1 below, it could be calculated that the average number of CAs per CAN is approximately 3.
5. In the 2014 Public Sector Directive, there is great focus on the division of contracts into lots as such a practice would increase the opportunity of SME's to tender at EU level (Herrera Anchustegui, 2016).
6. For a similar concern regarding the defence sector see Heuninckx (2008, 143).
7. Reservation is made, as the indication that the procedure concerns a framework agreement is made by "ticking a box"; hence, it is not unlikely that this exercise is sometimes skipped by contracting authorities in the haste of things. More precise data would require further in-depth analysis of the dataset.
8. http://simap.ted.europa.eu/documents/10184/49059/sf_003_en.pdf. (Accessed February 10, 2016).
9. Article 1(2) (9) of the Public Sector Directive.
10. Regulation No 1059/2003/EC of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS), OJ 2003 L 154/1. In the 2014 Public Sector Directive, reference is made to this regulation to explain the meaning of regional and local authorities, cf. Article 2(2).
11. Cf. Article 31 of the Public Sector Directive.
12. Cf. Article 21 of the Public Sector Directive.

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