

# iMonitor webinar



## Module 1.1 - Understanding corruption and risk indicators in public procurement

### Transcript

Welcome, everyone. This is the webinar for Module 1.1 of the iMonitor training package. The title is "Understanding corruption and risk indicators in public procurement". This is the first of four different modules. This you can consider as an introductory module where we lay the groundwork for the later in depth analysis and monitoring activities.

#### I. What is public procurement corruption?

So the first element, the first step in this module is to understand what is public procurement and how does corruption look like in this particular domain, so very specific to this area. First of all, public procurement represents the process by which governments buy goods, works and services from suppliers, typically private sector suppliers, but not always. Sometimes we have state-owned energy utilities, for example. So in that sense there is a formal buyer-supplier relationship, but both sides of the contracting process are government-related.

Now, these processes and also the resulting contracts are very highly regulated, largely homogeneous, harmonised across EU countries. Very much so for the high value contracts where there are EU directives, but also below these EU high level values, below these thresholds, there is also a relatively large degree of harmonisation.

Now, generally the procurement process can be divided into four different phases or stages. These are Planning and advertisement, Selection and submission, Evaluation and award, and then finally we have Contract management. Each of these phases includes a number of different tasks or sub-activities. Planning and advertisement phase is when the buyer prepares the whole process, then there is usually a procurement plan which includes planning of procurement activities for a period, say a financial year.

Then following this plan - more or less, right, there could be some deviations already here, but - basically an advertisement is put out either on a public website where anyone can read it, or sent out to a particular invited bidder or bidders. This is also often called request for proposals.

After this, when the buyer started to engage the market, we get to the Selection and submission phase. So this is where proposals are submitted. So bidders submit the proposal to the buyer and then the buyer can either do shortlisting - sometimes the procurement

process is two stage: we get initial submissions, which are often expressions of interest, and then the buyer shortlists and invites some of these interested bidders for the second stage, not necessarily happening, but often happening, especially for bigger, more complex projects. When shortlisting doesn't happen, then what happens really is just an open call and then proposal submissions and anyone can submit without being on the shortlist. At any rate, at the end of this, when proposals are submitted, then the buyer opens these technical and financial proposals.

So technical includes the substantive elements of how you build the road. And the financial is the costing and the detailed budget. After this, we move on to the Evaluation and award stage. This is where submitted bids and bidders are assessed for their eligibility. So that means whether they meet the minimum requirements. So public procurement is often complex. So only bidders who have confirmed experience and skills and technical endowments, technical specifications, only they can be considered for this tender. And then once eligibility is assessed, then the eligible bids and bidders are scored.

So there is a ranking prioritisation where the highest scoring bid will be the winning supplier. Scoring can happen purely on price or price plus some quality considerations. And finally, once the winning bid is selected, then there is a contract signature, and we move on to Contract management, where the contract is implemented.

And sometimes we also have a contract negotiation. So the contract can deviate from the submitted bid to some degree. Or maybe the initial contract was identical to the submitted bid, but during the implementation there were some unforeseen events that happened, I don't know, there was a lot of rain, so machines couldn't work on the foundation of the road. So timelines have to be adjusted.

Now this is a very specific domain of government activity, interaction between public and private actors. Hence corruption will be very specific as well. So in public procurement, corruption has a particular aim. Corrupt actors have a particular aim. They want to steer the public contract to a favoured bidder without being detected, playing by the rule, at least formally or on the surface, and avoiding detection. Now, how do they do this? They first and foremost have to avoid open and fair competition.

So that means the favoured bidder should have an advantageous position in competition compared to the other non-favoured or non-connected bidders. And this can be unjustified sole sourcing, so avoiding open competition and directly awarding a contract without sufficient justification. But there are some other techniques which I will introduce in a second.

Now, avoiding competition is necessary, but not sufficient for us to talk about corruption. And that's simply because competition can be limited for all sorts of non-corrupt reasons. So for us to talk about corruption, we also have to have a particular intent, when favouritism is behind the limited competition.

So unjustified sole sourcing happens exactly for the reasons of giving advantage to a connected bidder over the others. And favouring can happen also through tailoring specifications, sharing inside information, so on and so forth. Now this is a definition which is used by major international actors, such as the World bank, globally. But also this is a

definition which reflects, very much resonates or reflects what ordinary people understand by corruption in procurement.

Now, these sorts of corrupt transactions and acts then necessarily have some personal, particularistic aspect to it, right? So this is the mayor and the mayor's cousin running the supplier, the bidder. So there is always some violation of treating everyone equally.

Typically, large amounts are involved and it's very complex to set up corrupt deals in procurement, so quickly corruption in procurement gets institutionalised. What this means is that corruption happens over and over again.

And this also means that the actors who run corrupt schemes in procurement, they are typically very high-level actors. So even at the local level, that the mayor would be involved, one of the wealthiest local businessmen. But also at the national level, you can think about a minister or a prime minister and the family members of that person. And then basically these high-level, well-resourced, typically highly educated people run corruption schemes. So that also tells us a lot about the complexity and the sophistication of corruption schemes.

Now, going back to the four stages, going back to the definition, how does corruption look like in public procurement? Corruption and corrupt schemes or corrupt strategies will be tailored, will be specific to that particular aspect of procurement which is corrupted.

So if a corrupt group can corrupt or bias the selection phase, there's no point in corrupting contract management because the corrupt features, the deal has been set in stone. It's in the contract. Why deviate from it, right? So basically, these strategies, what I'm saying is that these strategies might substitute from each other.

If one corruption strategy in one stage didn't work, maybe another strategy will work in another. So if we find evidence for one corruption scheme, typically that's enough to talk about the whole process to be corrupt.

Okay, a couple of examples which I will come back to when I talk about data and indicators.

Short advertisement period: Sometimes the buyer needs to procure large products, maybe a big road, a bridge or a tunnel. So that means national rules oblige the buyer to advertise open. Well, that's not really handy because then non-connected, supposedly more productive firms can bid, and that would mean that the connected firm will not get the contract.

So what's the trick? The trick is advertise very short. You advertise Friday afternoon, deadline is Monday morning, and the specifications require all sorts of official stamps and documents which cannot be obtained without going into a public office. We know in most countries, Friday afternoon is not the high time of public bureaucracy. So basically you don't have any chance of getting together a meaningful and correct bid, unless - and that's where connections come in - the buyer connected to a particular bidder has already shared the information on the tendering terms. So the connected bidder could start earlier to put together the bid, collect those stamps, so on and so forth.

So even though the official advertisement period is short for everyone non-connected, it was actually very long and inside information shared with the connected bidder.

Avoiding publication of call for tenders is another frequent corruption scheme in the advertisement phase. And here it's basically if bidders don't know about an opportunity because the call for tenders was not advertised widely, then only the connected bidder who knows the information directly from the corrupt buyer will be able to submit a bid.

Selection and submission: Here we can have biased product specifications. You write down that you really want to buy this product that only one company can provide, hence unfairly excluding competing products which could fulfill the same need, but they are not supplied by the connected bidder.

Evaluation and award: The buyer can score bidders unfairly favouring the connected bidder over the others, or award the contract to a shell company which then subcontracts most of the work, but then takes the 5%, 10%, 30% of corrupt rent.

Finally, Contract management: Typically accepting substandard work is something which happens. Contract looks perfect, the prices look perfect, but actually what ends up being delivered is substandard. We agreed to 10 cm of concrete foundation. It's only five. It's in the foundation. So a year later, no one will see that. And then quality will suffer some years later when the building will not withstand an earthquake, will not withstand a heavy rain. By that time, the corrupt company will be gone.

So these are some examples, and I emphasise this, that these are only examples. Creativity in this respect, unfortunately, is pretty unlimited. Some of these we will be able to measure with data and indicators. Some of these we will need to have civil monitors going on site and checking what's going on.

## II. Data for corruption risk assessment

So what kind of data do we have or can we use for corruption risk assessment in public procurement? Data which is micro level, so individual tenders and contracts are the units of observation. These are, if you like, the rows in our Excel table. So that is the data, which can have higher or lower quality according to a number of dimensions.

The first dimension is scope of the data. We want a data set which includes all or nearly all transactions in the public procurement domain. So we don't have some contracts which are never advertised, never publicly released, and then them accounting for a high share of total spending.

Depth: So once a record is in the database, a contract is in our database, we want to know about a number of things about this contract. So you can think about the schemes I mentioned, like a short advertisement period. We need the dates for that, right? So to catch that scheme, you need to know when the call for tenders was published, when the submission period is, the exact dates, precisely, so that we can calculate advertisement period. So we want a lot of columns, if you like, in our imaginary Excel sheet.

And then we also want this data to be accurate. So what records, what values are in our database should reflect the actual behaviors, should reflect the legally binding official information. Contract values in the signed contract should be the same as the contract value published on the government website.

Next, we want this data, as fancy as it may be, to be accessible. So we want to be able to obtain this data relatively easily, speedily, on time, and then without error. So APIs - application programming interfaces - are highly preferred here. So the direct tapping, direct entry into the database of public procurement.

And finally, interoperability: I just mention this, that public procurement data is far more valuable if you can link it to other data sets, data sets such as company data. We will not cover this in detail, but it's important that everyone has a broader perspective on the uses of this kind of data.

So very quickly, countries widely differ in terms of reporting thresholds. So these are the minimum contract values above which a contract has to be placed on a central national public procurement portal.

So that's where coverage, the scope of the data set is very different. In many countries, such as Germany or Netherlands or Austria - this is data from 2018 -, in these countries, a lot of relatively high value contracts, so under 130,000 euros, these contracts are not transparently published.

And then you move on the left-hand side of this imaginary ranking, you have places like Belgium, Georgia, Armenia, where reporting thresholds are very low. So basically almost everything which is procured has to be put on a public website.

A couple of elements of data depth. We will get back to this. So I will not go into much detail, but basically a wide set of variables are useful for corruption risk scoring.

Data accuracy: One aspect of data accuracy is missing information. So what percentage of mandatory fields, so legally required information to be published, so what percentage of this information is not there? It's a very simple test, is it empty, that particular field, or not? So, contract value is required: is the public record including, does it include a number that contract value should be or not? And here are the percentages, the missing rates per country. The EU average is 7%, so that's not dramatically high, but there is quite some variation, and this changed quite a bit over the last five years.

Data availability: I'll jump over this because we will use Open Tender data, which has been built for easy access. But the source data is relatively hard to access in many countries. And this is just to give you context. So the iMonitor partner, Government Transparency Institute, has data beyond the EU. So that covers more than 50 countries and more than 130,000,000 contracts in a similar setup. So basically, our approach, we believe, can be rolled out for other European countries and also beyond Europe.

### III. Measuring corruption risks

Measuring corruption risk is the final part of this conceptual module. So this is where we bring together our conceptual understanding of how corruption happens in public procurement, and the data we can utilise to measure some of those corruption schemes.

So if we go into the details of procurement transactions, we have a contracting body or buyer, we have a supplier, and we have a contract. So that's very essentially, very on the basic level. This is what public procurement is about.

Now, if we have corruption in procurement, there is a particularistic personal tie, right? So we cannot enforce a corrupt deal at court. Instead, we need personal connections to be able to make those deals happen. So these would be the four main elements of a corrupt deal, partially formal, partially informal, in public procurement.

So what's great about this simple schema is that we can have corruption risk indicators tracking corruption activities, behavior, strategies in each of these four domains. So we can have tendering risk indicators, which look at the biases in the tendering process, I mentioned already a few of these. We can have supplier risk indicators, like a shell company. This, again, I mentioned. We can have risk indicators on the buyer side, on a contracting body side, and also personal or political connections indicators trying to catch these connections between buyer and supplier. These [are] often also called conflict of interest. So basically, what I'm saying here is that, based on this structure of corrupt deals in procurement, we have different indicators and we can build them independently from each other, and we can also pull them together, and this is something I will show you in a second.

So, one of the simplest indication of corruption risk in public procurement is when you take a competitive market, so a market where we know that there are multiple potential bidders, but then the tender only received one bid, and that's suspect. And that's in line with our corruption definition, because avoiding competition is a necessary condition for us to talk about corruption in public procurement. So when there is definitely a chance, an opportunity for competition, because there are other firms on the market, but only one firm bids, only one firm submits a bid to the tender, then this is something which is of particular risk, and this is a core corruption risk indicator for us. And this is single bidding rate for European regions using Tenders Electronic Daily data, so that's comparable across Europe. And you could see the darker colors in Eastern Europe and parts of Italy and Spain where single bidding is relatively high, in some cases above 40%, above 30%.

So basically, every second, every third tender on a competitive market is single bidding. So that's suspect. Why on earth couldn't these buyers generate meaningful competition for standard goods and services when we know that there are companies on those markets? So, strengthening our understanding that the single bidding is something which is linked to, correlated with, approximating corruption, we can also look at the country-level averages, and this is mainly European and some non-European countries, single bidding rates. So the rate of single bidding on competitive markets, that's on the y-axis, and we also have the horizontal x-axis where we have the Worldwide Governance Indicator Control of Corruption indicator, which is a perception-based indicator, but it's relatively good in differentiating high

and low corruption countries. So if you look at these two, you see that the matching between the two indicators is relatively strong, so the correlation is 0.45.

So basically, when you have a country which is perceived to be controlling corruption well, such as Sweden or Denmark, on the bottom right, single bidding rate is very low. If you move to the left-hand side, countries which are perceived to be controlling corruption not that well, Bulgaria, Greece, Italy, Hungary, you see that these countries have relatively high single bidding rate.

Now, what is very important is that a single indicator, any single indicator, can be imprecise, because schemes are diverse. I highlighted only a few, and there are far more corruption schemes which we might want to proxy. And also we have a problem, what we call false positives. So the indicator signals corruption, but actually there is a non-corrupt explanation for that.

So single bidding can overestimate risks, so be a signal of false positive, when there were just not enough companies, the demand was really specific, or there was a sudden increase in government spending, so suddenly a lot of supply was demanded and the market just couldn't absorb it, because this is the number of people who can build a highway in this country, and suddenly you want to build a lot of highways.

Single bidding can also underestimate risk, so that's false negatives. So when companies collude, so a corrupt firm pays off or asks some other firms to submit losing bids, then we don't have single bidding, but de facto there was no competition. So either way, false positive, false negatives, we have a sort of measurement bias, so single bidding on its own is not reliable enough.

So what's the solution? We can combine indicators which point at the same corrupt strategy, but from different angles. One example is non-advertisement of call for tenders. This was one of the schemes, and the result of this scheme is to give competitive edge to the favoured firm.

So how does this look like? How can we combine different red flags? Well, we can look at whether the call for tenders was advertised on the national procurement portal. So this is an example from Mexico. The left-hand side, the contracts are with advertisements - Yes - and right-hand side, contracts without advertisements - No.

And then you see that single bidding rate dramatically differs. So close to 20% when there is advertisement, a little over 50% when there is no advertisement. So what we have is a combination of intent, process, choice - advertisement or not - with the outcome, corresponding to a non-competitive, high corruption risk scenario.

These two indicators do not - that's very important - necessarily indicate corruption, but together they lower our measurement error. So when we approximate, when we estimate corruption risks, then these together are more reliable than the two separately. I can also go back to short advertisements, remember, advertising for very few days is something when the connected firm can have an unfair competitive advantage. And basically you can have predicted single bidding rates on the right-hand side and the actual advertisement or

submission periods on the left-hand side. So basically what you have is short advertisement periods, 30 to 48 days for high-value contracts - I believe this is data from Portugal - and you have single bidding rate 6% above the reference, so the national average.

And then when we have very short advertisements, so less than 30 days, and it's very short because it's high-value contracts, like building highways and such, then single bidding rate really jumps to 14% compared to the national average, to the reference.

Okay, so this is again the same logic. You have some process choice made by the buyer - how long to advertise - and an output of the process consistent with a corrupt interpretation - single bidding on an otherwise competitive market.

Now, again, I want to emphasise, this is no proof of corruption, but two indicators together, or three or four together, they really strengthen our corruption risk interpretation rather than some other interpretation to the observed empirical patterns.

Tax havens are, again, or shell companies, or opaque company structures are something where we can think about single bidding and shell companies or secrecy jurisdiction registered companies. And you see here, this is data from all across the EU from a few years ago. Single bidding is higher when we have a company registered in a tax haven versus when a company is not registered in a tax haven. Again, the logic is single bidding on a competitive market, plus another risk factor - this time, this is not tendering risk, but supplier risk -, they together give us a stronger indication of corruption risk.

And then the corruption risk indicator can have various individual indicators pulled together into a single score. Then you can get an indication of the overall level of risk following different techniques, some linked to advertisements, some linked to procedure type, some linked to scoring rules and how they can be abused. And pulled together, they can give you a general, robust view of corruption risk.

And if you go back to the same logic as before, looking at country-level perceptions of corruption risk - the Worldwide Governance Indicator Control of Corruption - and this time, the combination of red flags, not just single bidding, we have an even closer fit between what we think about corruption in a country, based on surveys of experts and businessmen, what have you, and objective data such as the public procurement corruption risk indicator.



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