



Identifying corruption risks in public procurement with big data

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Government
Transparency
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About public procurement

- It is large amount of money
 - 20-40% of total government spending in OECD countries (2015)
 - 5-20% of annual GDP (2015)



About public procurement

- There is lots of discretion

„Using good professional judgement”

versus

Reallocation towards (politically) connected
low performing companies

Contracts with only one bid received 2006-2015

Data: Tenders Electronic Daily

2019. 11. 19.



Corruption definition in public procurement

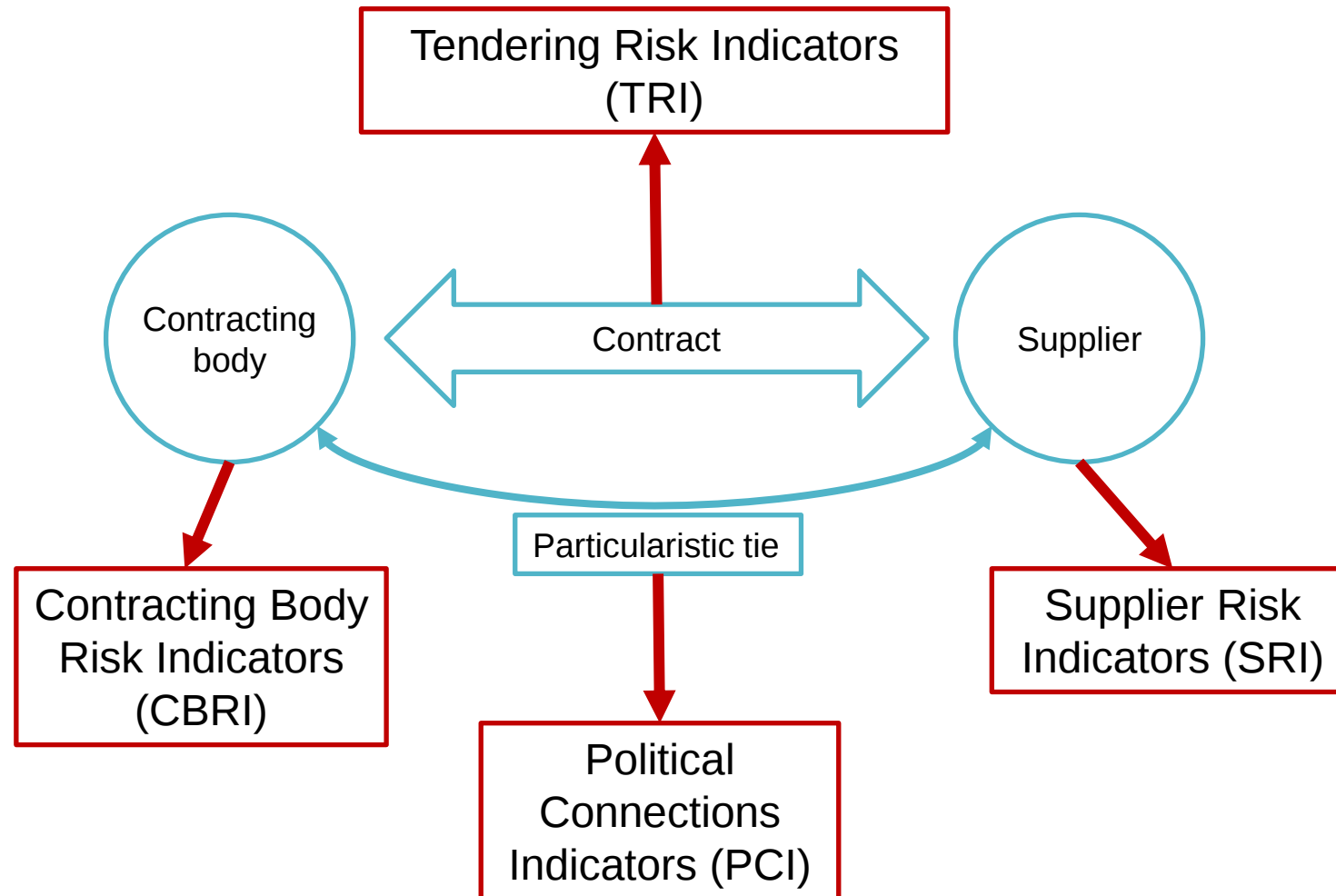
In public procurement, the aim of corruption is to steer the contract to the favored bidder without detection.

This is done in a number of ways, including:

- ***Avoiding competition*** through, e.g., unjustified sole sourcing or direct contract awards.
- ***Favoring a certain bidder*** by tailoring specifications, sharing inside information, etc.

See: World Bank Integrity Presidency (2009) Fraud and Corruption. Awareness Handbook, World Bank, Washington DC. pp. 7.

Systematic search for potential indicators



Source: Fazekas, M., Cingolani, L., & Tóth, B. (2016). A comprehensive review of objective corruption proxies in public procurement: risky actors, transactions, and vehicles of rent extraction: GTI-WP/2016:03. Government Transparency Institute. Budapest.

Tendering Risk Indicator examples

- Single bidder contract
- Call for tender not published
- Eligibility criteria length
- Length of advertisement period
- Weight of non-price evaluation criteria
- Cancelled procedure re-launched subsequently
- Contract value increased subsequently
- ...

Supplier Risk Indicator examples

- Multiple companies at the same address
- Local winner company
- Company's age
- Company incorporated just before winning PP contracts, right after political regime change
- Beneficial owners untraceable: Company registered in a tax haven
- Owners affiliated with companies already closed/under investigation

Contracting Body Risk Indicator examples

- Existence of internal audit procedures
- Ratio of open procurement and other non-open procurement procedures at the agency level
- Ratio of emergency or contingency funds spent to total expenditure
- Number of appeals related to procurement procedures
- Citizen satisfaction at the agency level

...

Political Connections Risk Indicator examples

Direct personal ties

- Kinship, friendship, membership in associations

Revolving door

- Political officeholders moving between public office and bidding firms

Political party donations

- Company or individual donating to party or individual electoral campaign

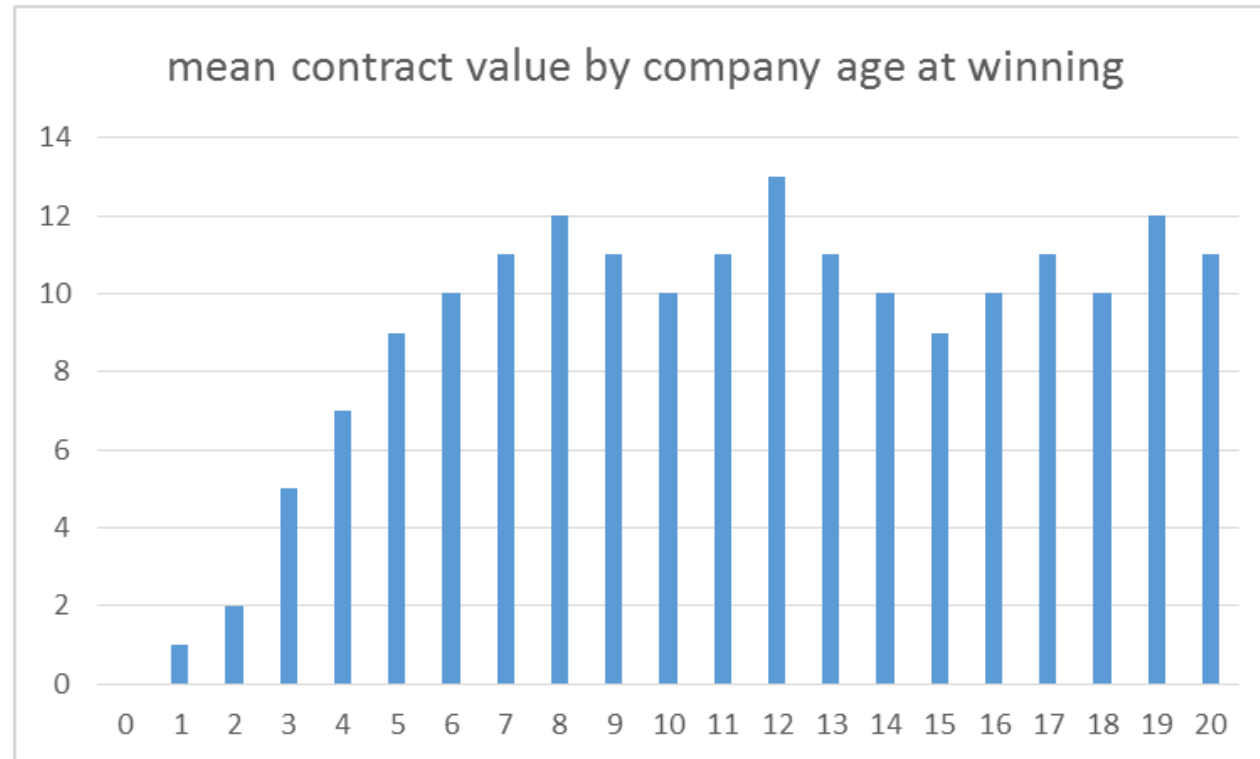
Lobbying

- Lobbying activity targeting political office holders

Example for a Suppliers' Risk Indicator:

Expected success of companies by age

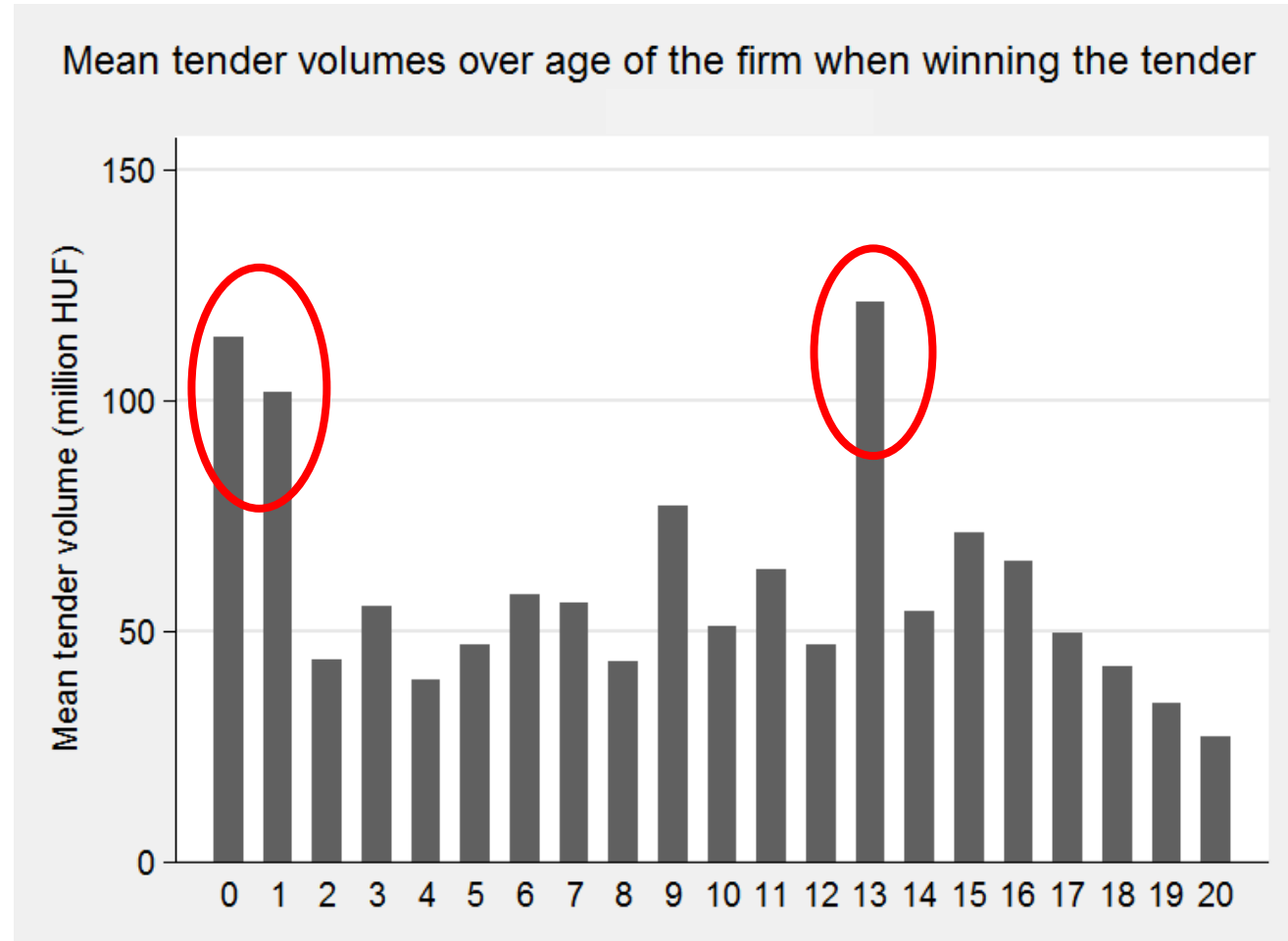
1. Gradual build-up of contracts
2. Natural fluctuation over time



Example for a Suppliers' Risk Indicator: *Observed success of companies at ,specific' ages*

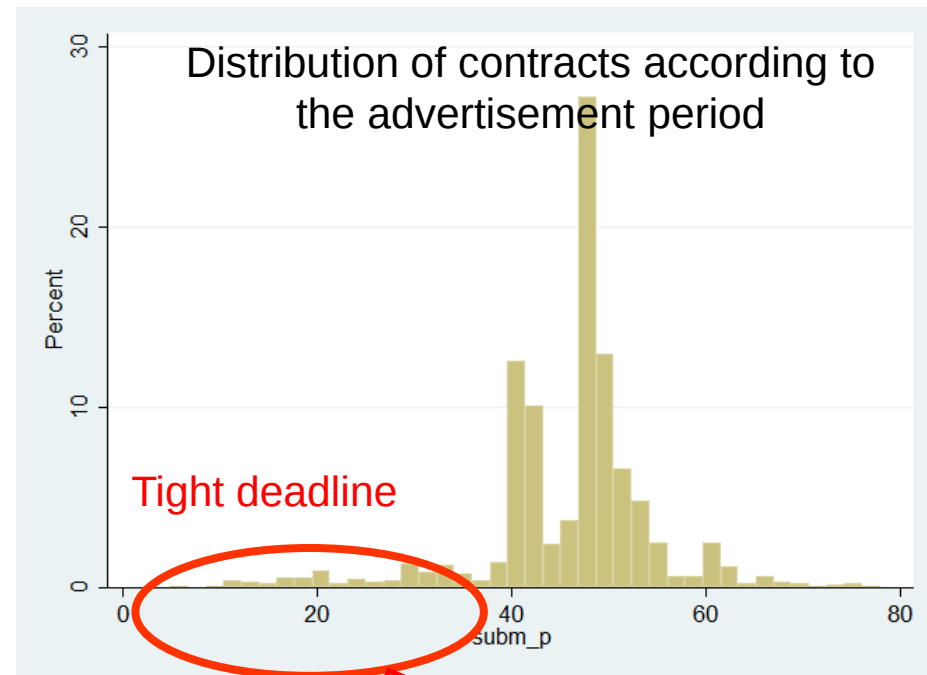
1. ,Just' founded companies
2. Companies founded under party last in power

Hungary, 2011

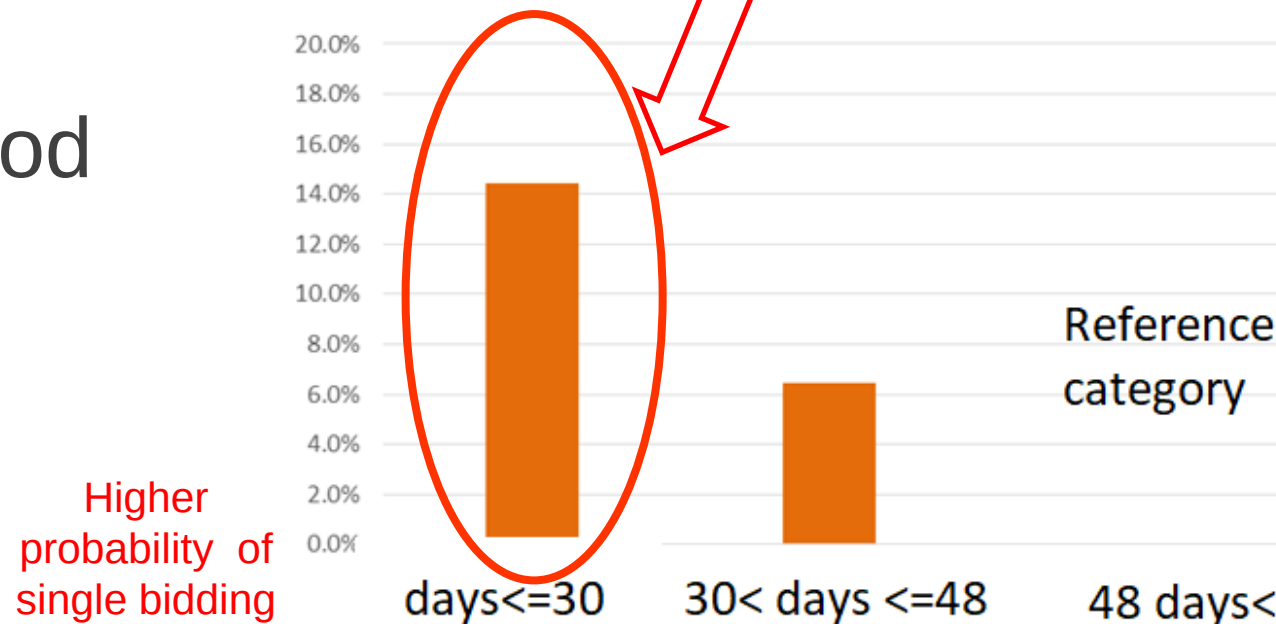


Finding robust indicators by statistical testing

- Does it really limit/distort competition?
- The example of advertisement period and single bidding

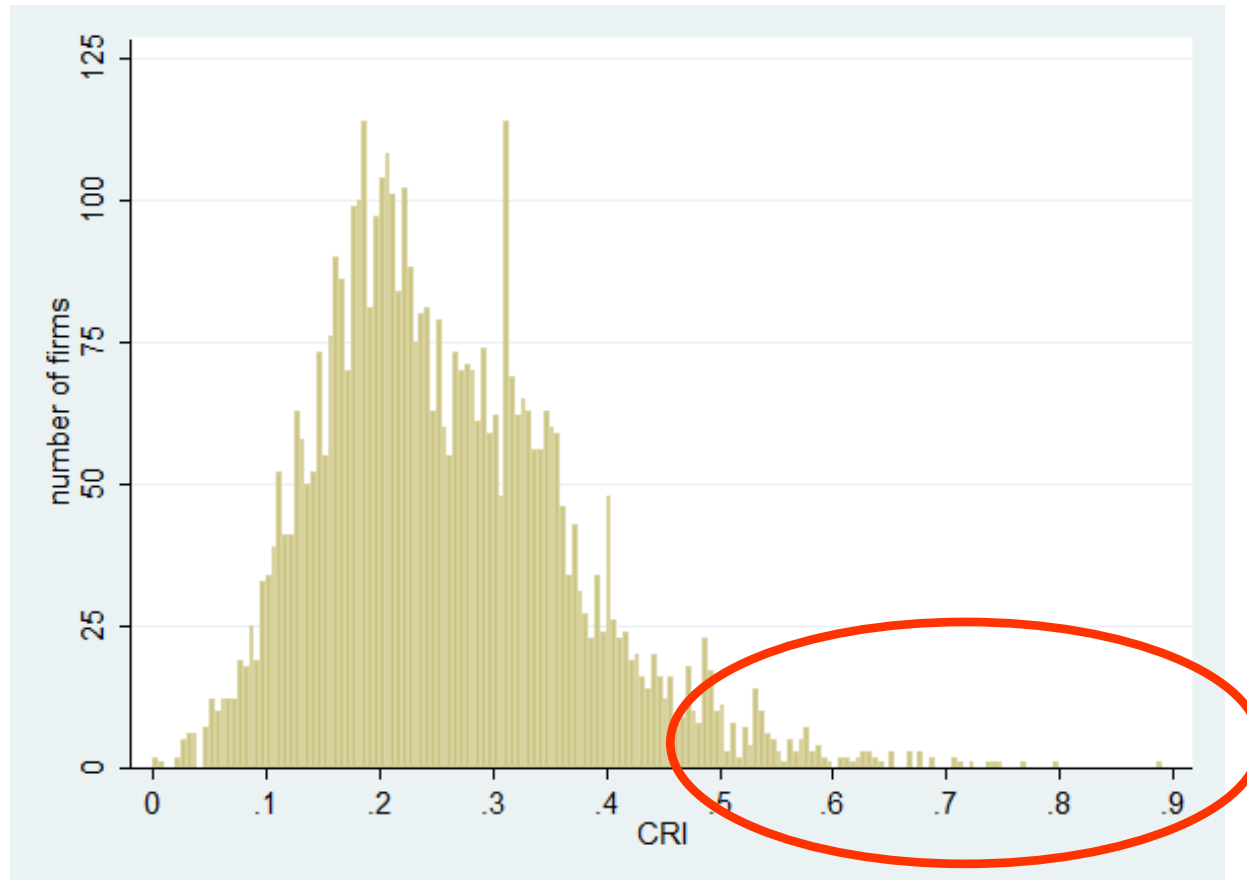


Source: EU's Tenders Electronic Daily (TED), Portugal , 2009-2014



Making indicators more robust

- Combining elementary indicators into an index: Corruption Risk Index (CRI)
- Simple or weighted average



Comments and limitations

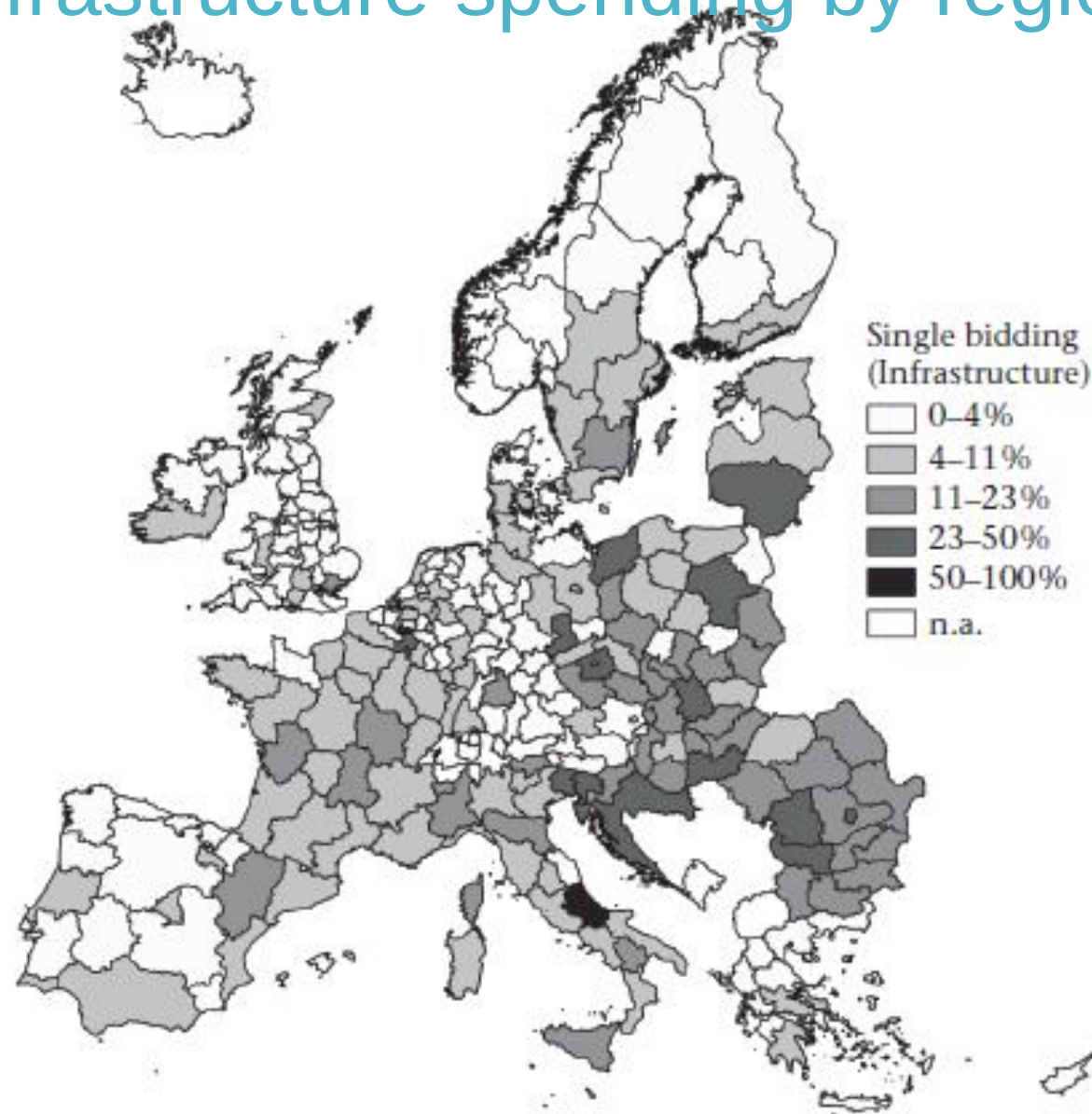
- You get what you measure: there is no general indicator of corruption!
- Only lower bound estimate: sophisticated actors can avoid detection (e.g. cartels)
- Reflexivity
- Variance-driven: corruption is deviation from a norm

Applications

- 1. Informing the public:** <http://opentender.eu>
- 2. Risk assessment for targeting an intervention**
 - Mezo-level (e.g. sectoral, regional)
 - Organisation-level
 - Project/tender-level

Corruption risks in infrastructure spending by region

Some regions in otherwise low corruption risk countries carry high risks



Applications

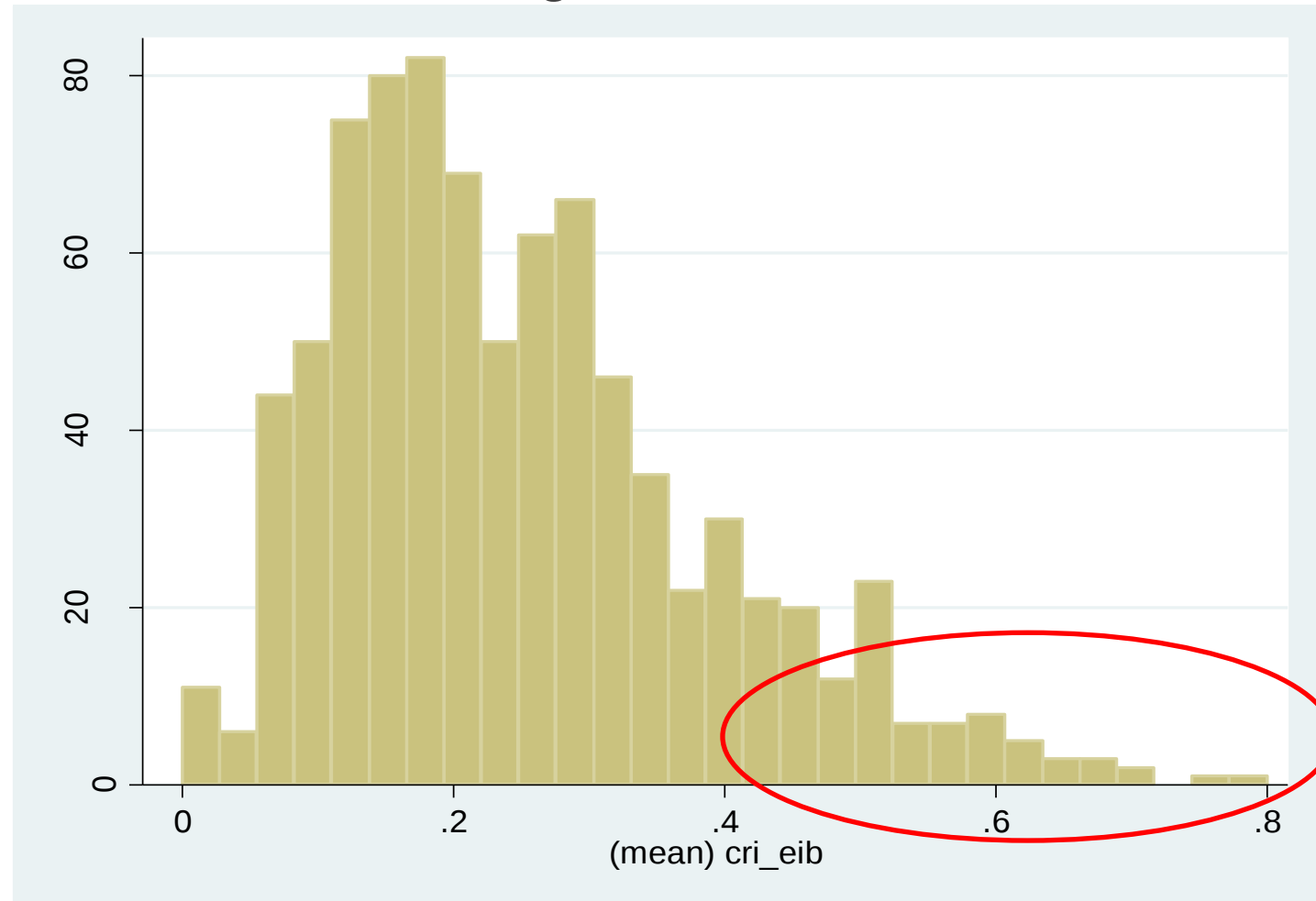
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Organisational risk scoring: EIB example

EIB counterpart avg. organisational risk scores

General PP behavior ~ Eib funded procurement behavior

250,000+ tenders, 10 tailored red flags

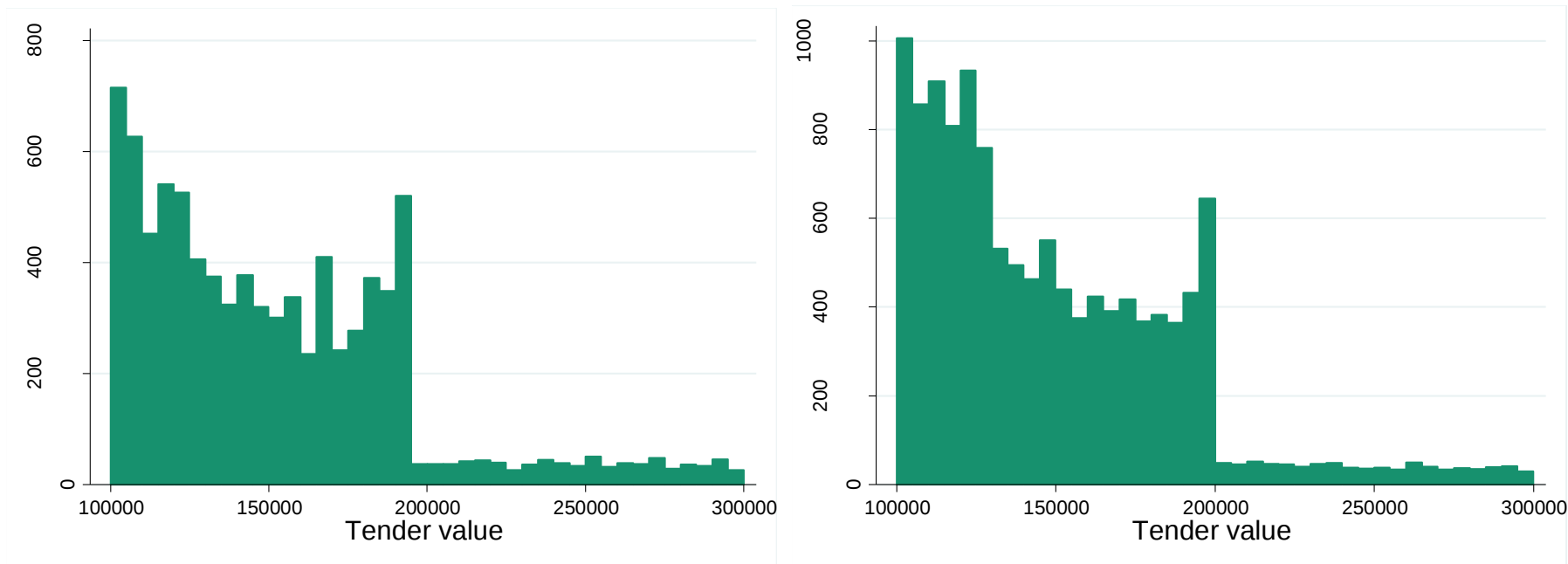


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- 4. Compliance checks: e.g. applying procurement rules**

Potential contract slicing

Number of tenders around the EU publication threshold in 2010-2011 (left) and 2012-2013 (right) – Services, local government, Poland



Source: Tóth, B., Fazekas, M. (2017): *Compliance and strategic contract manipulation around single market regulatory thresholds – the case of Poland*. GTI-WP/2017:01, Budapest: Government Transparency Institute. See: <http://www.govtransparency.eu/index.php/2017/08/28/compliance-and-strategic-contract-manipulation-around-single-market-regulatory-thresholds-the-case-of-poland/>

Thank you for the attention!

Further resources

Fazekas, M., & Kocsis, G. (2017). Uncovering High-Level Corruption: Cross-National Corruption Proxies Using Government Contracting Data. British Journal of Political Science, available online.

<http://www.govtransparency.eu/index.php/2017/08/28/uncovering-high-level-corruption-cross-national-corruption-proxies-using-government-contracting-data/>

Fazekas, M., Cingolani, L., & Tóth, B. (2016). A comprehensive review of objective corruption proxies in public procurement: risky actors, transactions, and vehicles of rent extraction: GTI-WP/2016:03. Government Transparency Institute. Budapest.

<http://www.govtransparency.eu/index.php/2016/08/22/a-comprehensive-review-of-objective-corruption-proxies-in-public-procurement-risky-actors-transactions-and-vehicles-of-rent-extraction/>

Tóth, B., Fazekas, M. (2017): Compliance and strategic contract manipulation around single market regulatory thresholds – the case of Poland. GTI-WP/2017:01, Budapest: Government Transparency Institute.

<http://www.govtransparency.eu/index.php/2017/08/28/compliance-and-strategic-contract-manipulation-around-single-market-regulatory-thresholds-the-case-of-poland/>

Fazekas, Mihály , & Tóth, Bence, (2017), Proxy indicators for the corrupt misuse of corporations. U4 Brief. October 2017:6. U4 - Chr. Michelsen Institute, Bergen, Norway

<http://www.govtransparency.eu/index.php/2017/10/23/proxy-indicators-for-the-corrupt-misuse-of-corporations/>