This project is co-funded by the Seventh Framework Programme for Research and Technological Development of the European Union

Identifying red flags for corruption measurement in Poland

Mihály Fazekas* - István János Tóth**

*University of Cambridge and Corruption Research Center Budapest, mihaly.fazekas@crcb.eu

**Hungarian Academy of Sciences and Corruption Research Center Budapest

Stefan Batory Foundation, high-level workshop, 7 July 2015, Warsaw, Poland

Overview

- Introduction
  - Measurement approach
  - Definition of corruption
- Preliminary Polish results
  - Data overview
  - Individual red flags
  - Preliminary findings
- Further work, discussion

Starting point

- Available indicators are either biased or too idiosyncratic
  - Perception-based survey instruments measure PERCEPTIONS
  - Experience-based survey instruments suffer from conformity bias and lack of access
  - Audits and case studies lack scope and representativeness

→ Need for new indicators

The CRCB measurement approach

- New approach to corruption in PP
  - harnessing BIG DATA,
  - built on thorough understanding of context, and
  - ‚open-ended'
- Indicator characteristics:
  - Specific
  - Real-time
  - 'Objective'/hard
  - Micro-level
  - Aggregatable + comparative

Why public procurement?

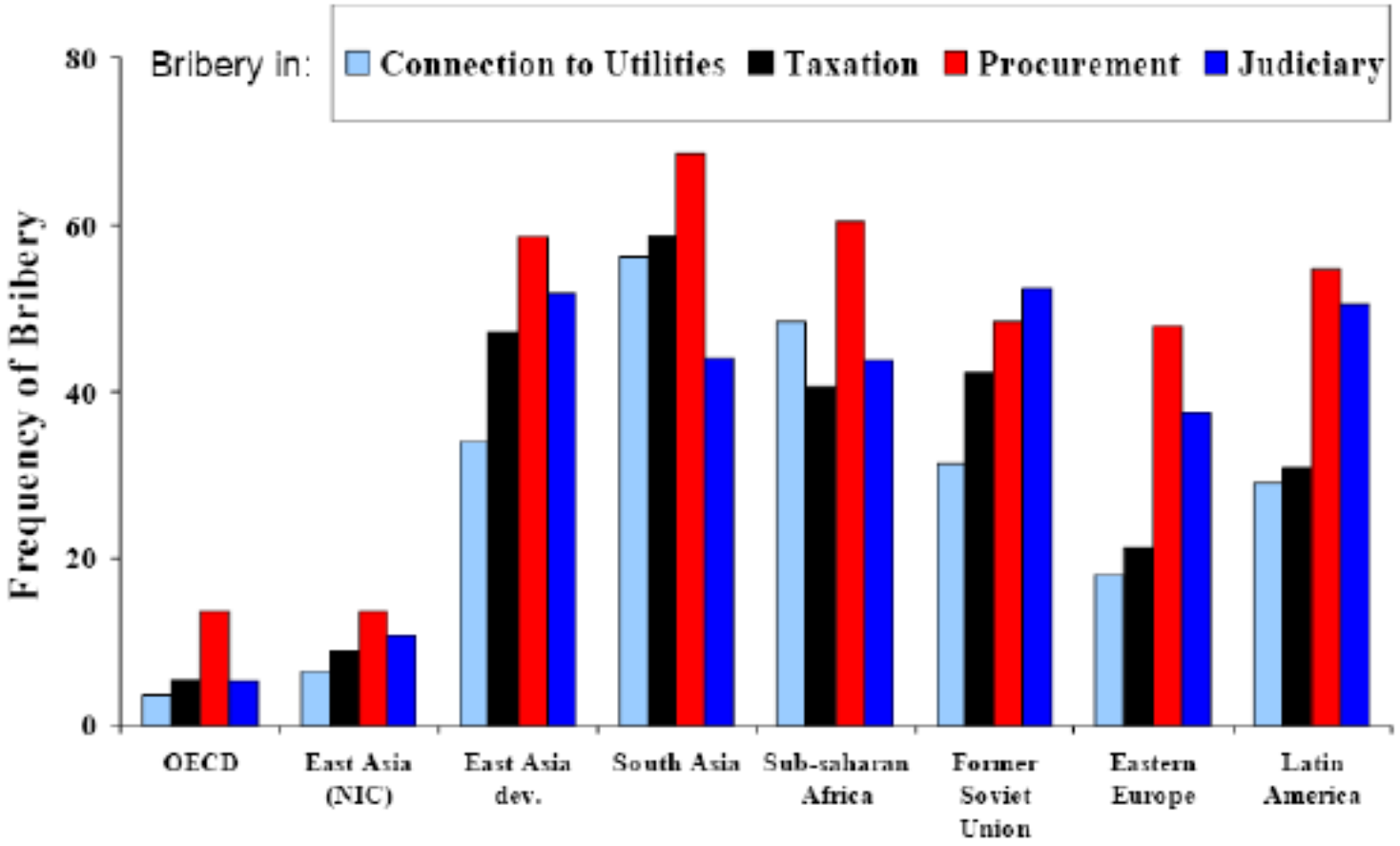
1. A lot of money involved

2. Crucial role in development (e.g. capital accumulation)

3. Indicates the broader quality of institutions

Why public procurement?

4. Very corrupt



Practical definition

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 contracting 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.

Theoretical definition

- Specific definition (just like measurement)
- Institutionalised grand corruption in public procurement

institutionalised grand corruption in public procurement refers to the regular particularistic allocation and performance of public procurement contracts by bending universalistic rules and principles of good public procurement in order to benefit a group of individuals while denying access to all others.

FULL data template

- Public procurement data
- Company financial and registry data
- Company ownership and management data
- Political officeholder data
- Treasury accounts of public organisations
- Arbitration court judgements

DIGIWHIST

- Goals
  - Advancing anticorruption, transparency, and spending efficiency in public procurement
  - Open data and indicators for 35 European countries: EU, EEA, Caucasus
  - Helping audit bodies fighting corruption, fraud, and collusion
- Scope
  - March 2015 – February 2018
  - Consortium: Cambridge, Hertie, CRCB, Datlab, Open Knowledge Foundation, Transcrime

DIGIWHIST: key outputs

- Data:
  - Transparency and procurement legislation
  - Micro-level procurement data
  - Company information
  - Public organisation information
  - Asset declarations
- Indicators:
  - Corruption
  - Transparency
  - Administrative quality
- Utilization
  - Risk assessment software for public servants
  - Web portals, mobile apps
  - Whistleblower reporting

Polish PP data

1. Tenders Electronic Daily (TED): EU PP Directive
   – Above 130K/4M EUR

1. National PP database: national PP law
   – Below 130K/4M EUR
   – Above 14K EUR

Blueprint for measuring institutionalised grand corruption in PP

1. Corruption Risk Index (CRI): generation and allocation of rents

2. Political Influence Indicator (PII): political influence on companies' market success

3. Supplier Risk Index (SRI): award to risky businesses

4. Political Control Indicator (PCI): direct political control of contractors

Corruption Risk Index (CRI)

- Probability of institutionalised grand corruption to occur

$$0 \leq CRI^t \leq 1$$

where 0=minimal corruption risk; 1=maximal observed corruption risk

- Composite indicator of elementary risk (CI) indicators

$$CRI^t = \Sigma_j w_j * CI_j{}^t$$

- Tailored to country context: Poland

CRI construction

1. Wide set of potential components
   - 30 red flags from Fazekas et al, 2013 (HU+)
   - 19 red flags from JBF (PL)
   - 10 red flags from zIndex (CZ)

   - Challenge: capturing
     needs assessment→implementation

Indicators tested so far

1. Single bidder contract
2. Call for tenders not published in official journal
3. Procedure type
4. Length of eligibility criteria
5. Number of certificates requested
6. Call for tenders modification
7. Length advertisement period
8. Weight of non-price evaluation criteria
9. Length of decision period

More will be tested!

CRI construction

1. Wide set of potential components
2. Narrowing down the list to the relevant components: 7 CIs
   - Checking whether CI fits corruption logic
   - Set of regressions on single bidder (and winner contract share:work in progress)

Regression setup

- Outcome variables
  - Single bidder (binary logistic regression)
- Explanatory variables:
  - Elementary corruption indicators
- Control variables:
  - Contract size, length
  - Type of market
  - Year
  - Authority type, sector, and status

CRI construction

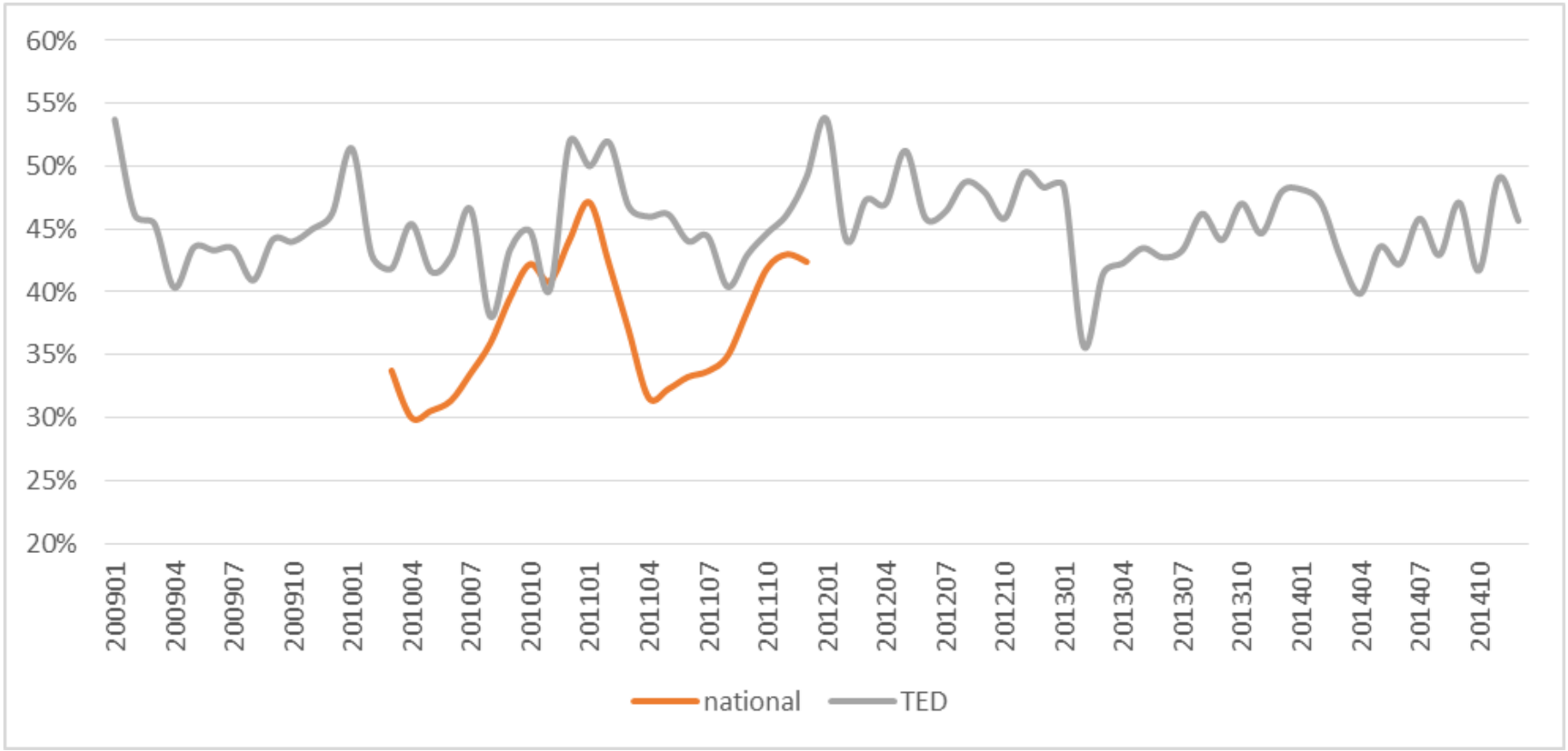
1. Wide set of potential components
2. Narrowing down the list to the relevant components
3. CRI calculation: determining weights
   - Stronger predictor→higher weight
   - Norming to 0-1 band

Components of PL-CRI

1. **Single bidder contract**
2. Call for tenders not published in official journal (TED only)
3. Procedure type
4. Length of eligibility criteria (national PP only)
5. Length advertisement period
6. Weight of non-price evaluation criteria
7. Length of decision period

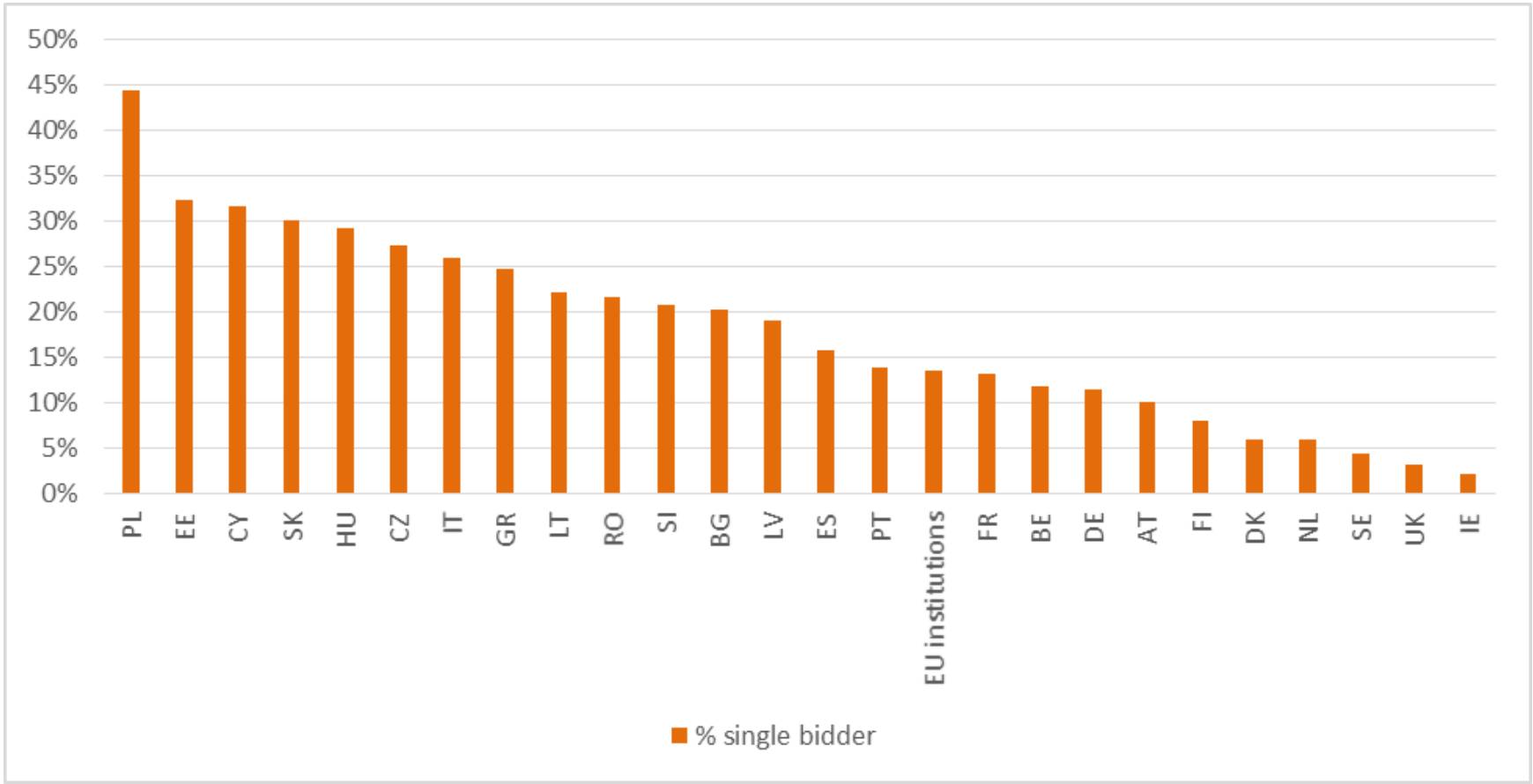
Single bidding: TED vs national PP

No sign of change over time



Single bidding in EU context (TED)

- Worse performance across the EU...
  ... by a large margin



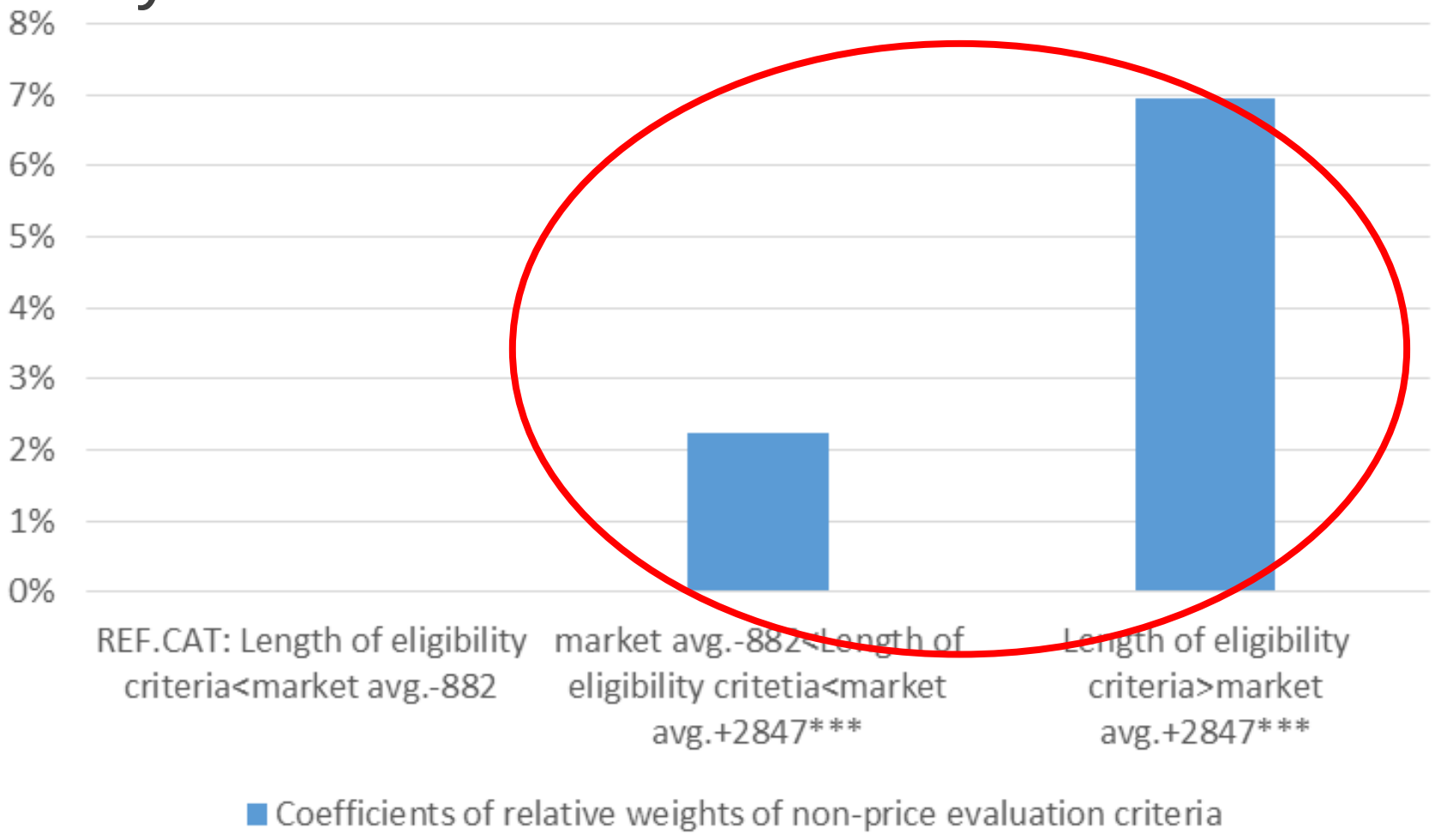
Procedure type: national PP

- Single bidder share

ca_procedure	mean	N
Free order	99%	12,126
Competitive Dialogue	49%	98
Negotiated_w_pub	47%	292
Negotiated_wo_pub	44%	104
Restricted	36%	1,430
Open	36%	426,848
Electronic Auction	11%	567
Total	37%	441,465

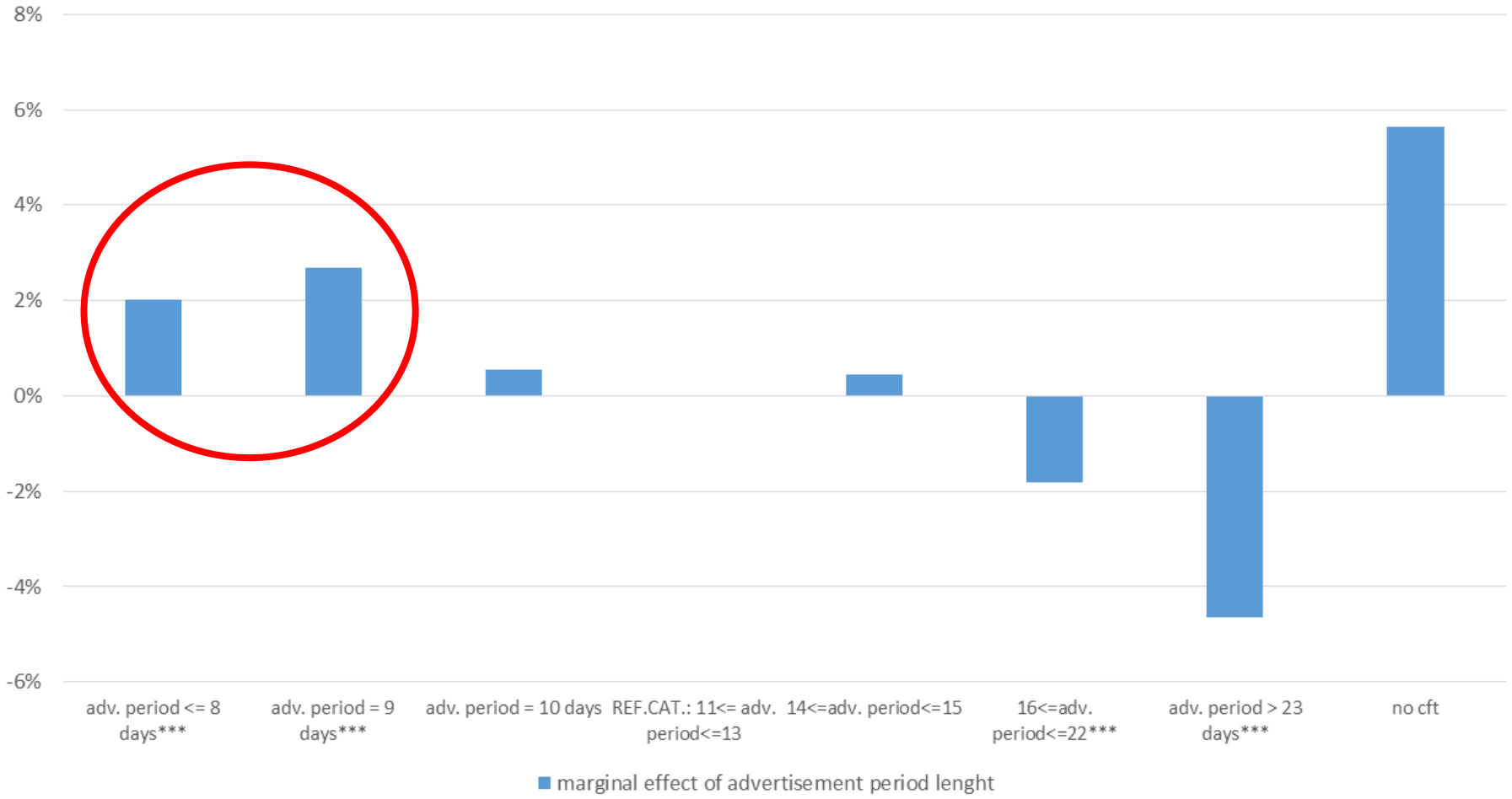
Eligibility criteria: national PP

Only shortest criteria are of no risk



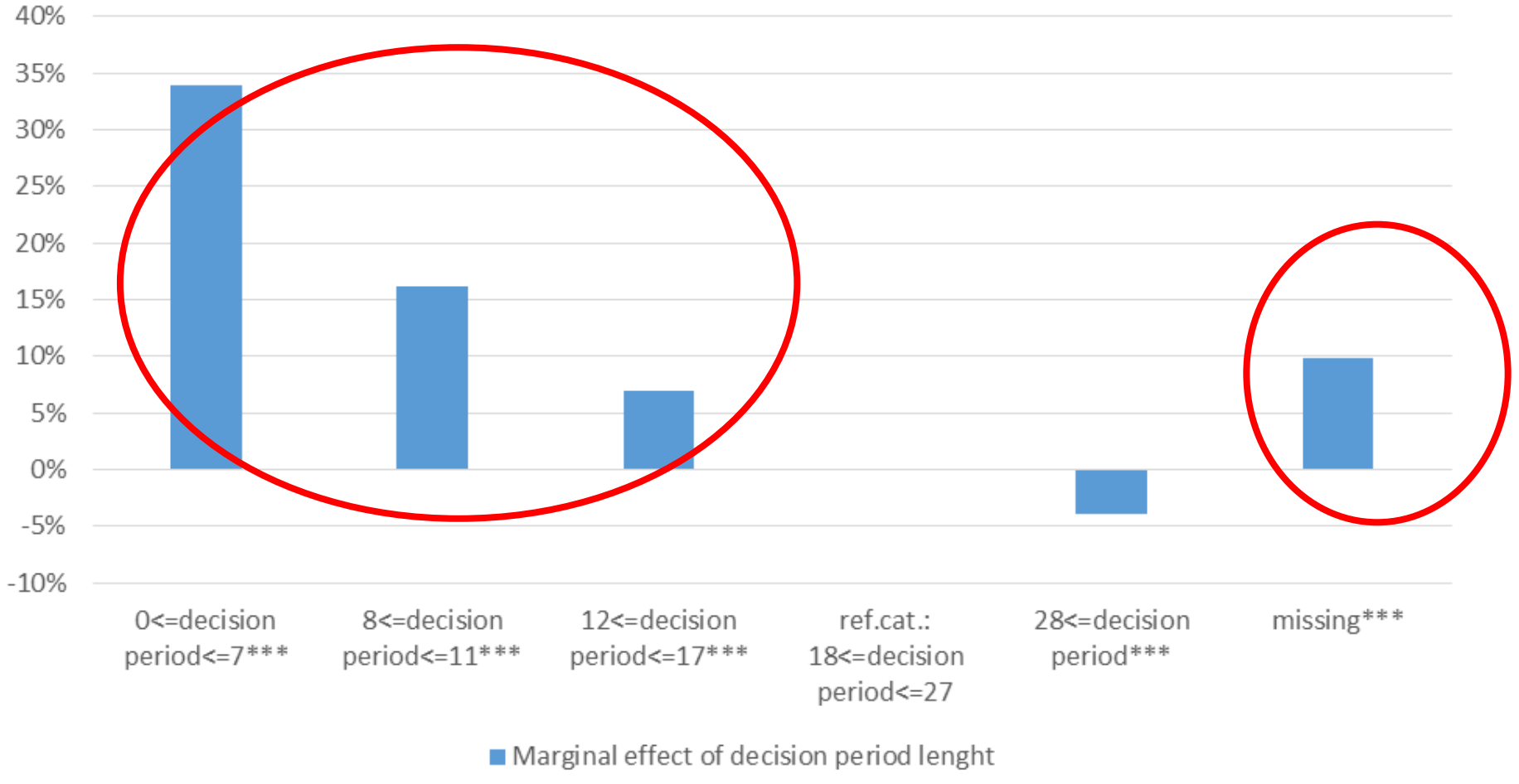
Advertisement period: national PP

Less than 8/9 days is the key risk domain



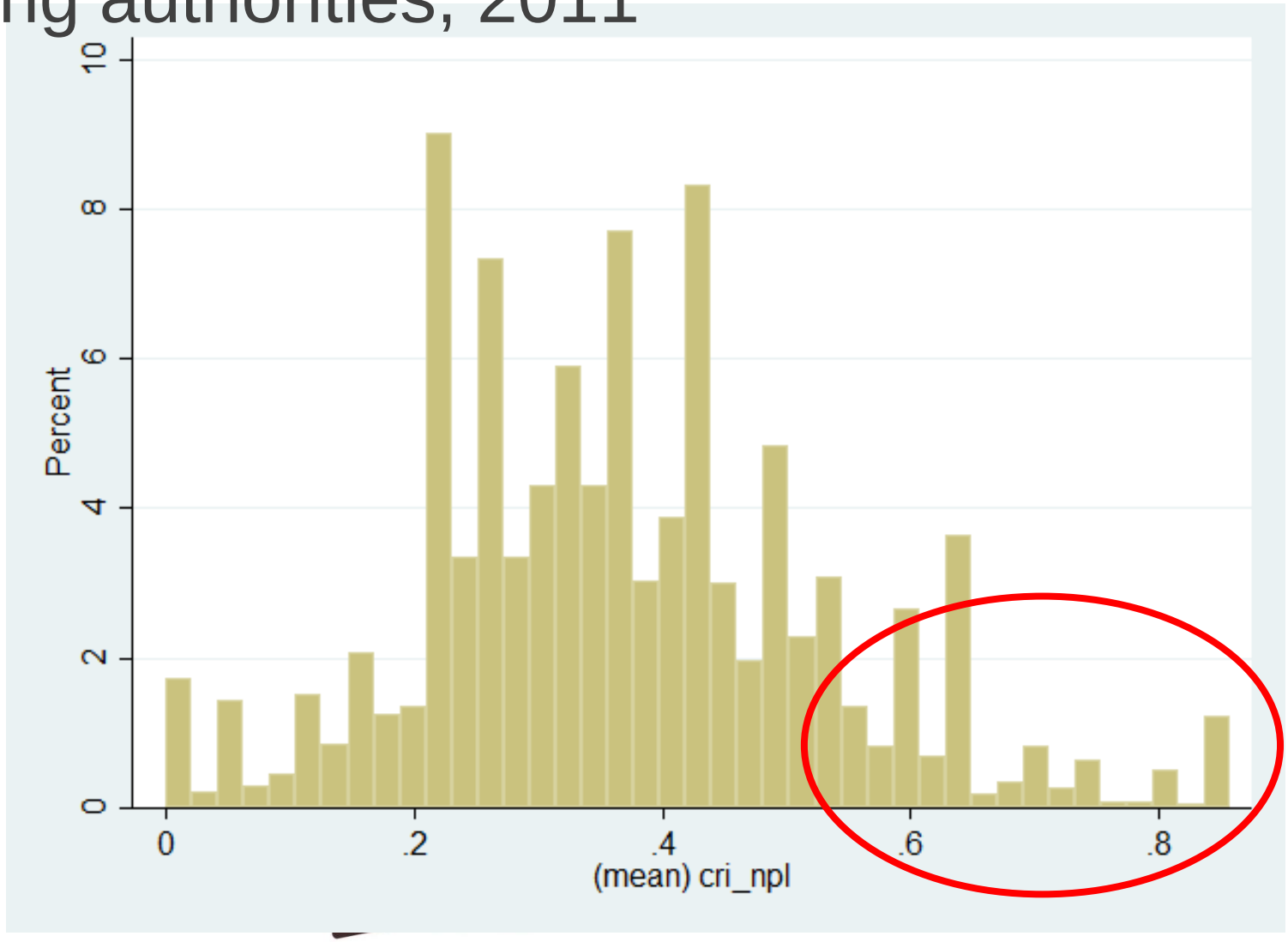
Decision period: national PP

Less than 7/11/17 days and missing are risky



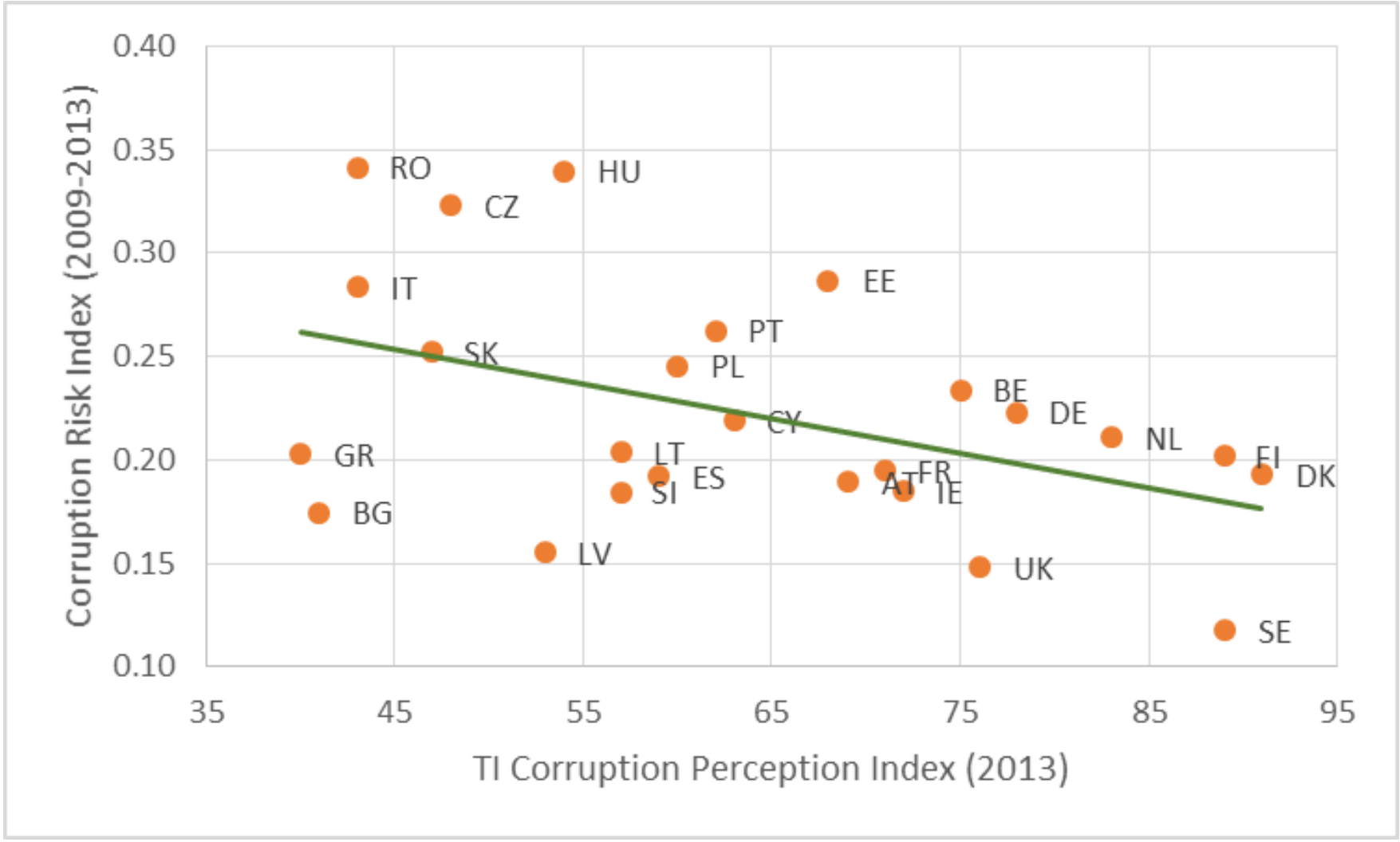
CRI distribution: national PP

Contracting authorities, 2011



Macro validity

- CRI correlates with subjective indicators of corruption
- TI-CPI (2013) vs CRI (2009-2013, TED)



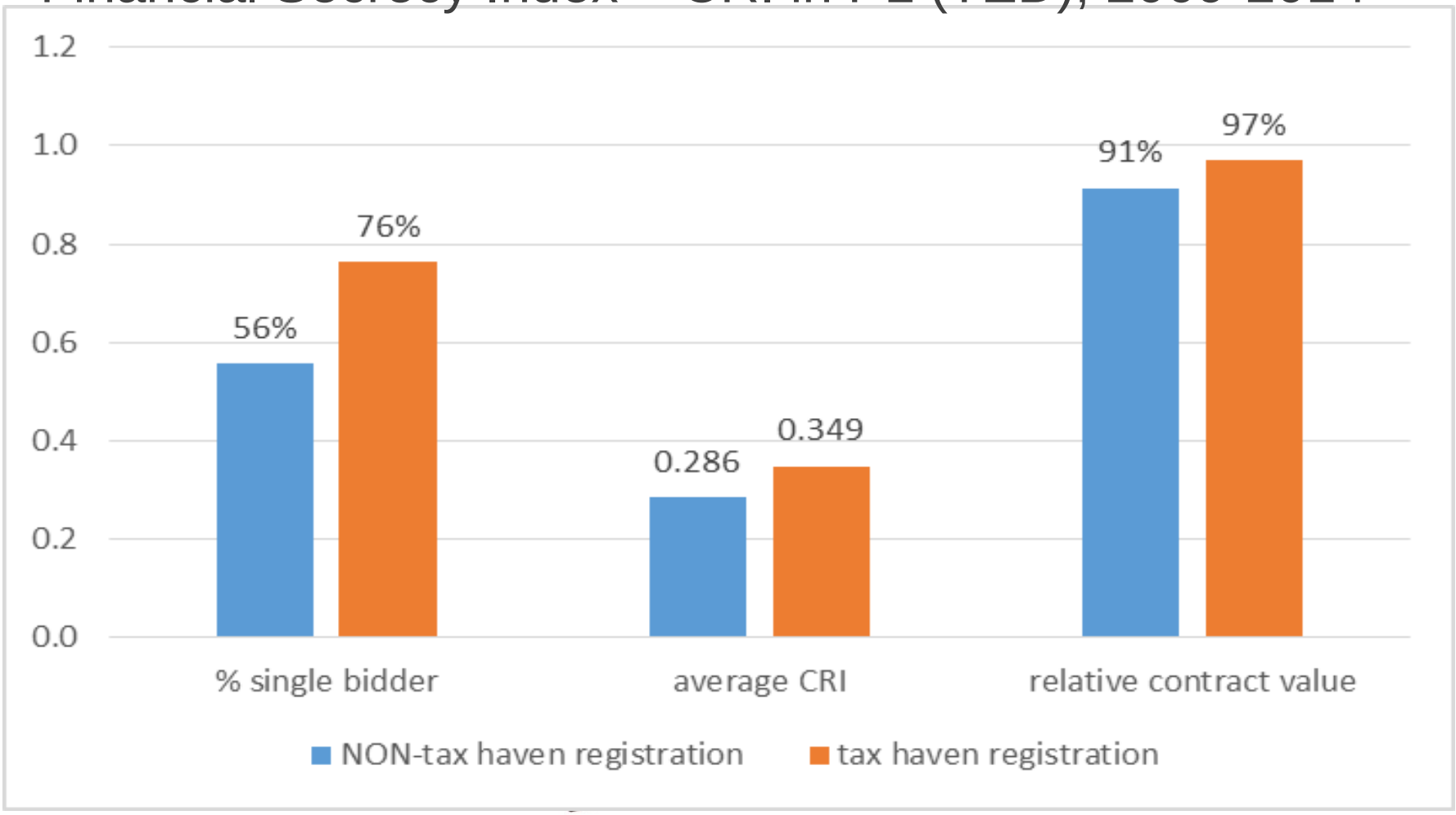
Micro validity 1.

- Corruption proxies relate to external variables as expected: **rent extraction** from PP contracts
- Relative contract value + CRI in PL, 2009-2014

	TED PL		national PP	
dependent variable	relative contract price (contract price/estimated price)			
independent variable				
single bidder contract	0.092		0.136	
CRI		0.215		0.211
sign.	0.000	0.000	0.000	0.000
each regression contains constant				
controls: sector of the contracting entity, type of contracting entity, year of contract award, country of contract award, main product market of procured goods and services, and contract value				
N	356,840	356,840	386,311	203,029
R2	0.061	0.045	0.114	0.106

Micro validity 2.

- Corruption proxies relate to external variables as expected: **money laundering, diversion of funds**
- Financial Secrecy Index + CRI in PL (TED), 2009-2014



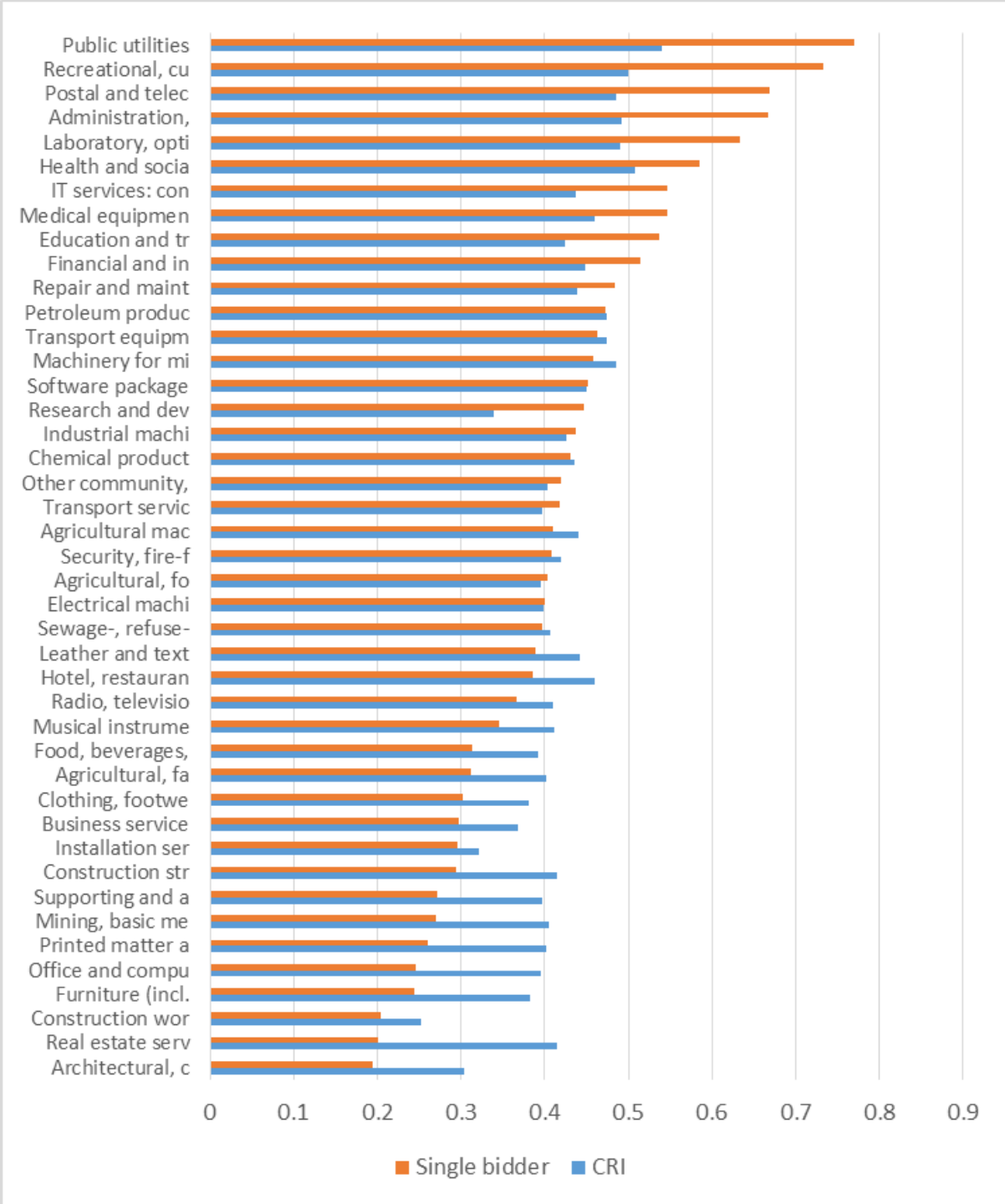
Limitations

- Data, data, data!
- You get what you measure: no general indicator of corruption!
- Only lower bound estimate: **sophisticated actors can avoid detection**
- Reflexivity
- Considering complex strategies for limiting competition: e.g. cartels

Potential applications

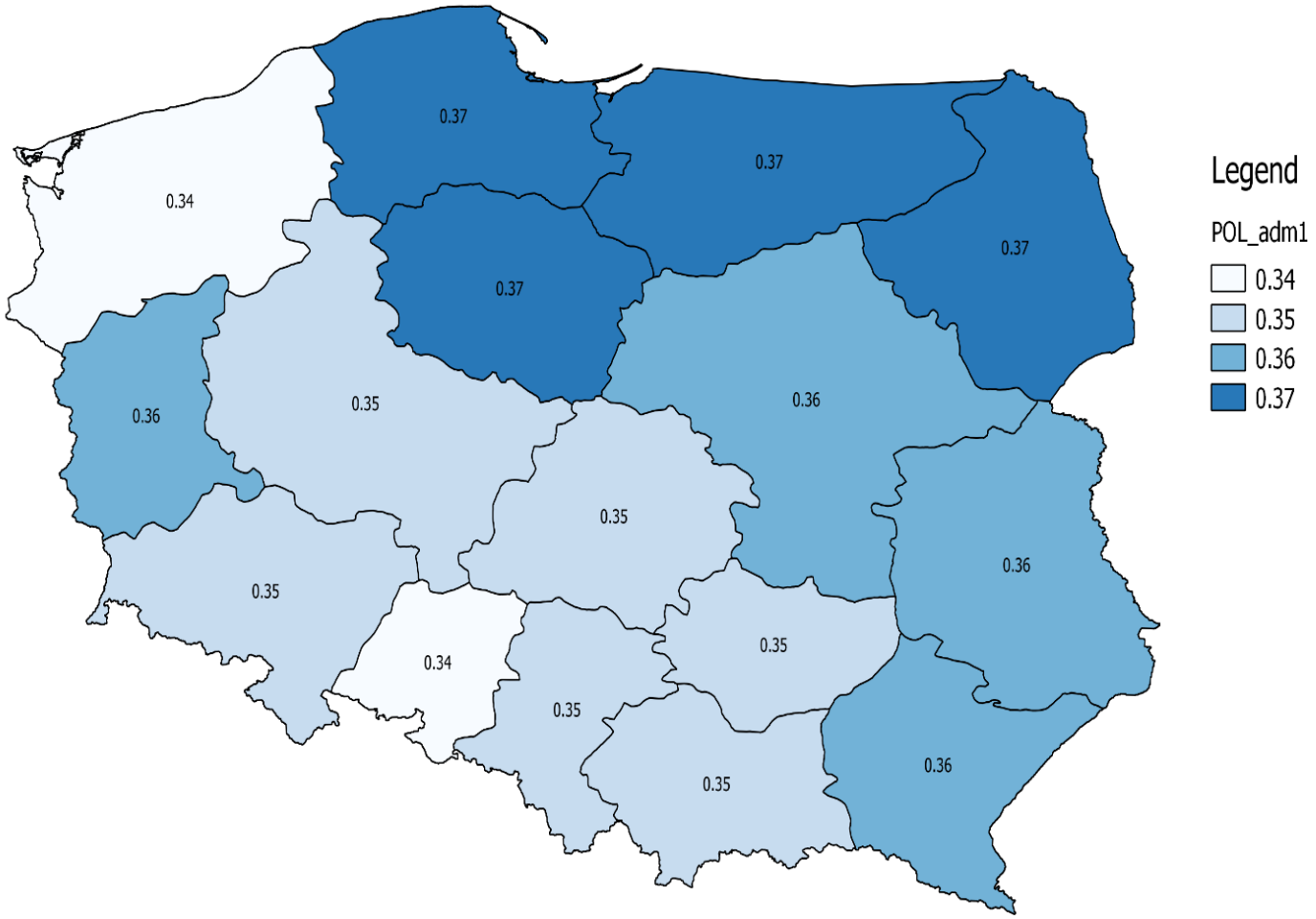
1. **Identifying risky areas**: across time, sectors, regions, public bodies
2. **Evaluating large funding programmes:** e.g. EU structural funds
3. **Evaluating regulatory instruments:** EU PP Directive vs Polish PP law
4. **Risk-based audit:** contracts, contracting bodies, suppliers
5. **Supporting public to hold government accountable:** Information website

Sectoral differences: national PP



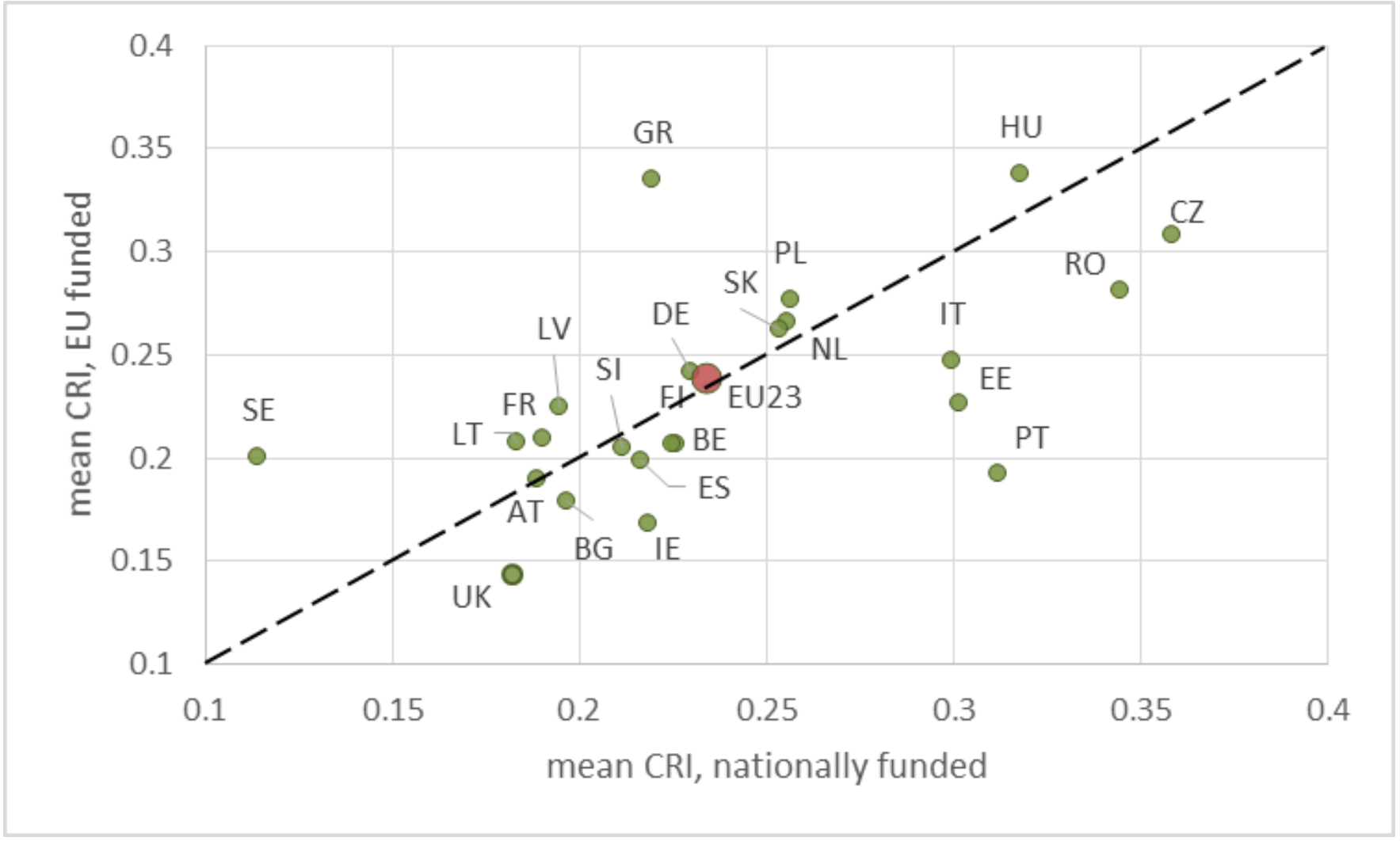
2015.07.09.

Regional differences: national PP



Relative corruption of EU funded contracts

- EU23, 2009-2014, TED
- CRI in EU funded and non-EU funded procurement

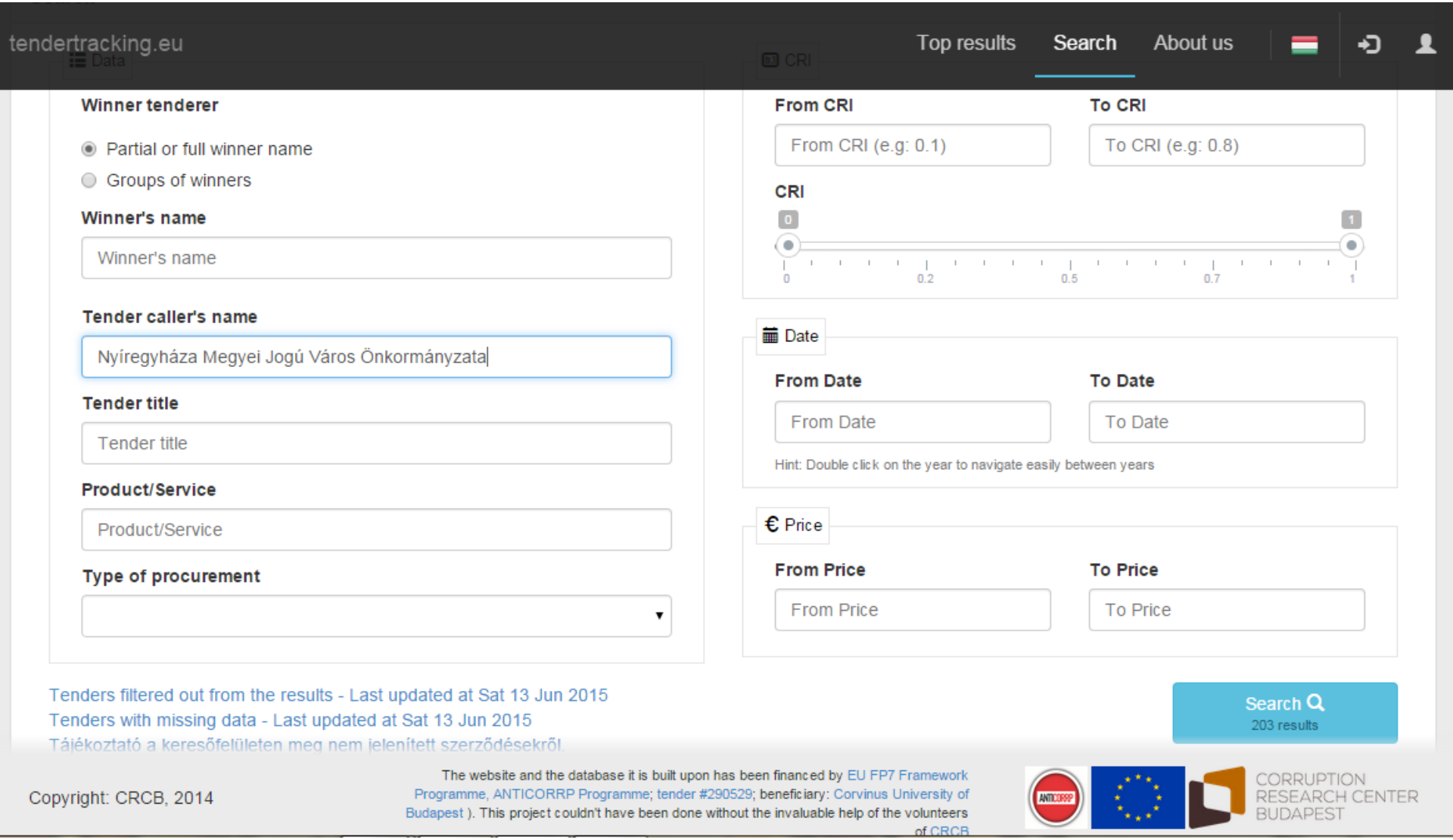


TED vs national procurement

TED appears to carry higher risks than national PP

effect of higher contract value?

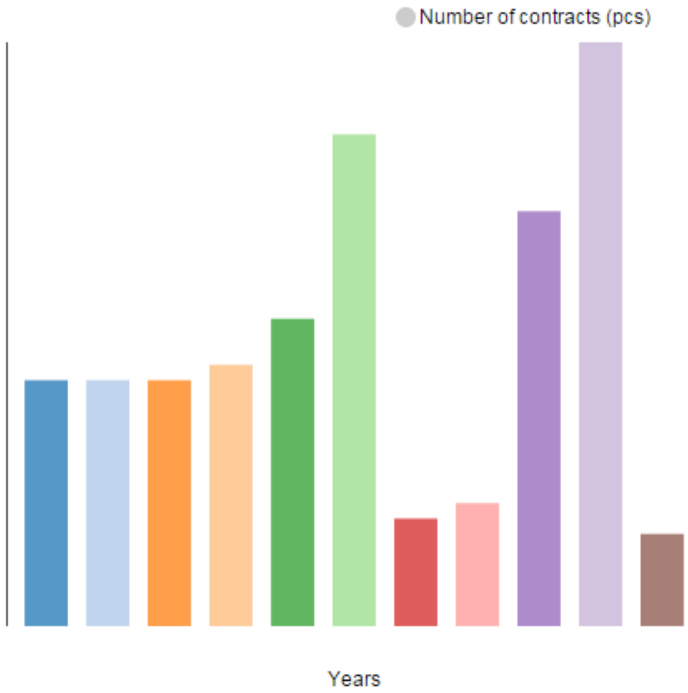
www.tendertracking.eu



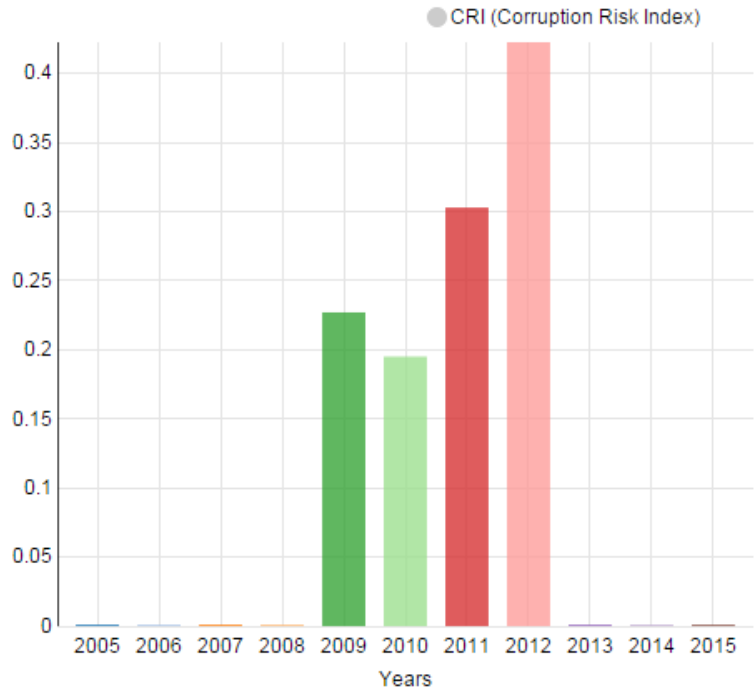
tendertracking.eu

Top results Search About us

Number of contracts



CRI



Copyright: CRCB, 2014

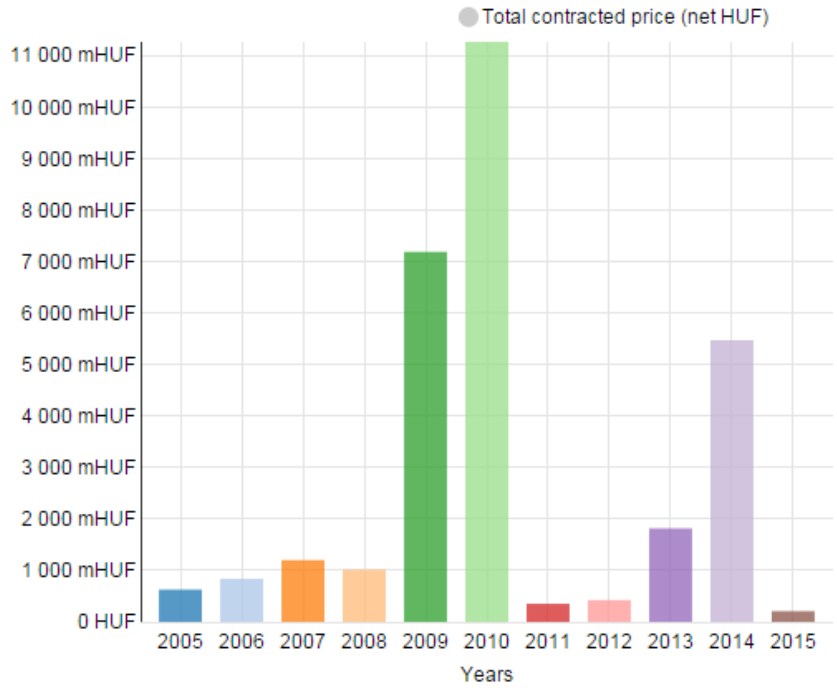
The website and the database it is built upon has been financed by EU FP7 Framework Programme, ANTICORRP Programme; tender #290529; beneficiary: Corvinus University of Budapest). This project couldn't have been done without the invaluable help of the volunteers of CRCB

CORRUPTION RESEARCH CENTER BUDAPEST

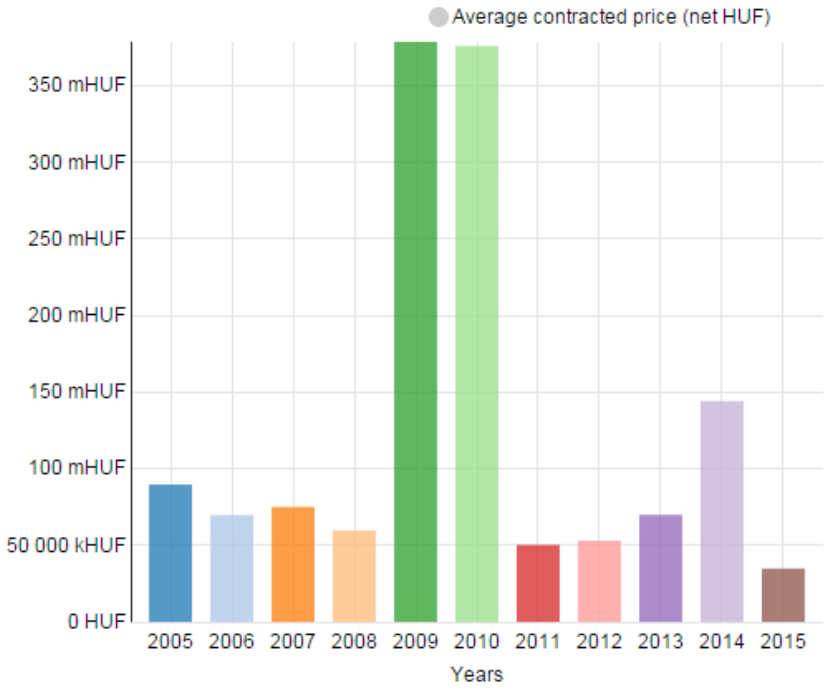
tendertracking.eu

Top results Search About us

Total contracted price



Average contracted price



Copyright: CRCB, 2014

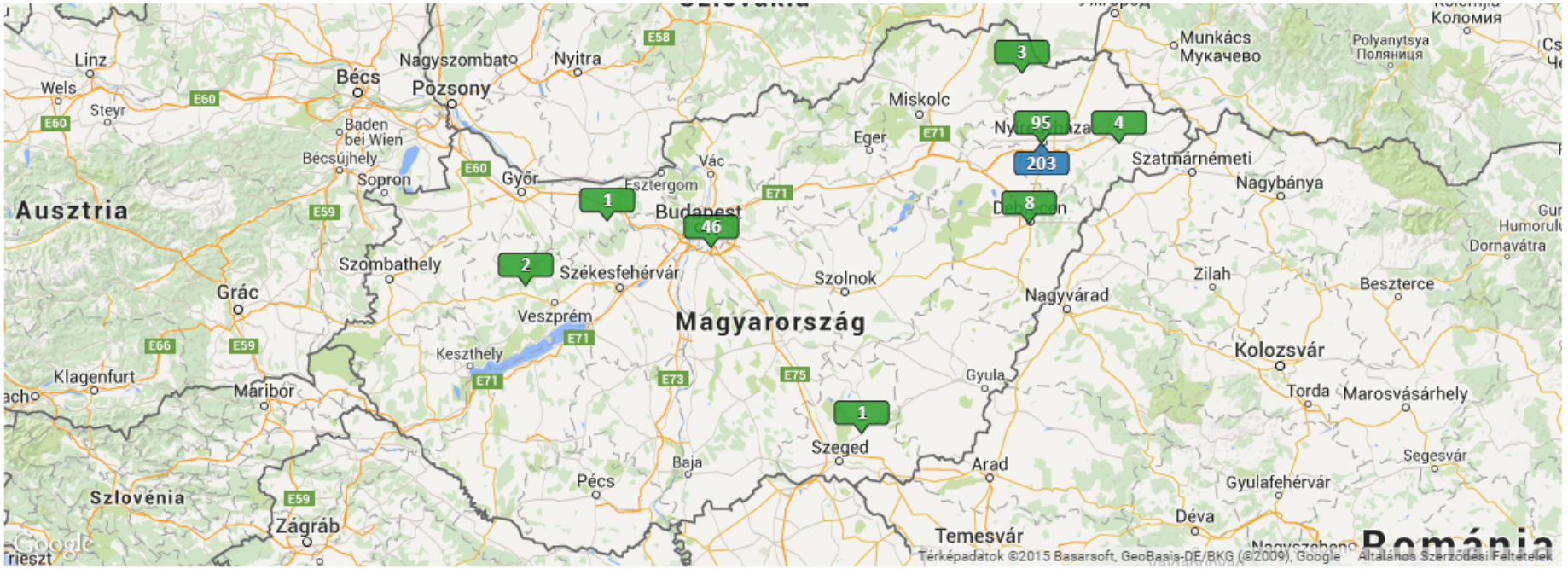
The website and the database it is built upon has been financed by EU FP7 Framework Programme, ANTICORRP Programme; tender #290529; beneficiary: Corvinus University of Budapest). This project couldn't have been done without the invaluable help of the volunteers of CRCB

CORRUPTION RESEARCH CENTER BUDAPEST

tendertracking.eu

Top results Search About us

Map

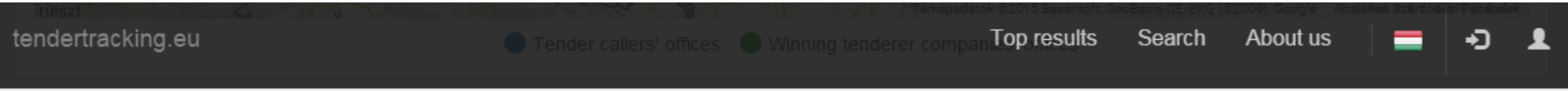


Tender callers' offices Winning tenderer companies' offices

Copyright: CRCB, 2014

The website and the database it is built upon has been financed by EU FP7 Framework Programme, ANTICORRP Programme; tender #290529; beneficiary: Corvinus University of Budapest). This project couldn't have been done without the invaluable help of the volunteers

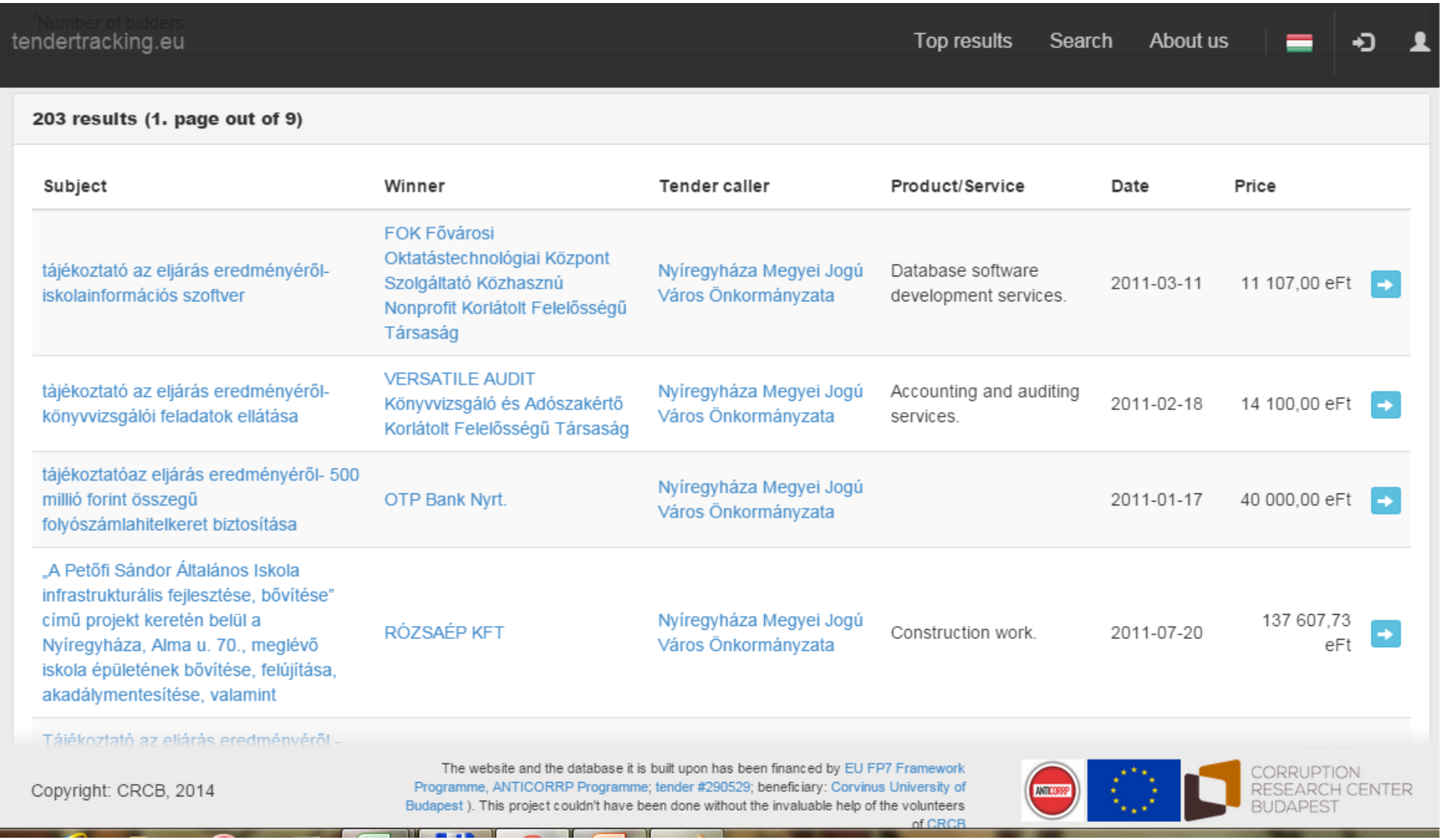
CORRUPTION RESEARCH CENTER BUDAPEST



Descriptive statistics

	Count	Minumum	Maximum	Average	Deviation	Median	Mode
Price	186	1 168 640 HUF	2 948 000 000 HUF	163 629 274 HUF	460 357 839 HUF	30 425 000 HUF	2 500 000 HUF
CRI	67	0.06	0.62	0.24	0.14	0.22	0.07
N.B.*	141	1.00	11.00	3.04	1.62	3.00	3.00

*Number of bidders

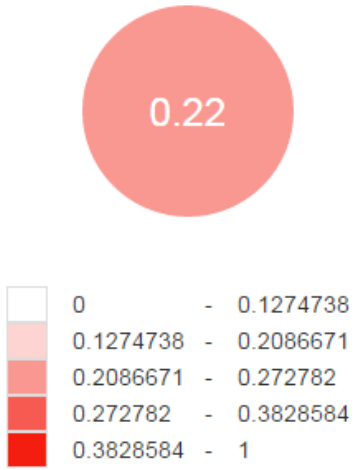

Number of bidders
tendertracking.eu
Top results
Search
About us
203 results (1. page out of 9)
Subject
Winner
Tender caller
Product/Service
Date
Price
tájékoztató az eljárás eredményéről- iskolainformációs szoftver
FOK Fővárosi Oktatástechnológiai Központ Szolgáltató Közhasznú Nonprofit Korlátolt Felelősségű Társaság
Nyíregyháza Megyei Jogú Város Önkormányzata
Database software development services.
2011-03-11
11 107,00 eFt
tájékoztató az eljárás eredményéről- könyvvizsgálói feladatok ellátása
VERSATILE AUDIT Könyvvizsgáló és Adószakértő Korlátolt Felelősségű Társaság
Nyíregyháza Megyei Jogú Város Önkormányzata
Accounting and auditing services.
2011-02-18
14 100,00 eFt
tájékoztatóaz eljárás eredményéről- 500 millió forint összegű folyószámlahitelkeret biztosítása
OTP Bank Nyrt.
Nyíregyháza Megyei Jogú Város Önkormányzata
2011-01-17
40 000,00 eFt
„A Petőfi Sándor Általános Iskola infrastrukturális fejlesztése, bővítése" című projekt keretén belül a Nyíregyháza, Alma u. 70., meglévő iskola épületének bővítése, felújítása, akadálymentesítése, valamint
RÓZSAÉP KFT
Nyíregyháza Megyei Jogú Város Önkormányzata
Construction work.
2011-07-20
137 607,73 eFt
Tájékoztató az eljárás eredményéről -
Copyright: CRCB, 2014
The website and the database it is built upon has been financed by EU FP7 Framework Programme, ANTICORRP Programme; tender #290529; beneficiary: Corvinus University of Budapest). This project couldn't have been done without the invaluable help of the volunteers of CRCB
CORRUPTION RESEARCH CENTER BUDAPEST

tájékoztató az eljárás eredményéről-könyvvizsgálói feladatok ellátása

Information

Tender caller:	Nyíregyháza Megyei Jogú Város Önkormányzata
Winner:	VERSATILE AUDIT Könyvvizsgáló és Adószakértő Korlátolt Felelősségű Társaság
Product/Service:	Számviteli és könyvvizsgálói szolgáltatások.
Date of Publishing:	2011-02-18
Contracted Price:	14 100 000 HUF
Number of bidders:	3 pcs
Show procurement:	http://kozbeszerzes.hu/adatbazis/mutat/hirdetmeny/portal_0846_2011

CRI



Map

Pictures

Copyright: CRCB, 2014

The website and the database it is built upon has been financed by EU FP7 Framework Programme, ANTICORRP Programme; tender #290529; beneficiary: Corvinus University of Budapest). This project couldn't have been done without the invaluable help of the volunteers of CRCB

CORRUPTION RESEARCH CENTER BUDAPEST

Product/Service: Számviteli és könyvvizsgálói szolgáltatások.
Date of Publishing: 2011-02-18

Contracted Price:	14 100 000 HUF
Number of bidders:	3 pcs
Show procurement:	http://kozbeszerzes.hu/adatbazis/mutat/hirdetmeny/portal_0846_2011

0	-	0.1274738
0.1274738	-	0.2086671
0.2086671	-	0.272782
0.272782	-	0.3828584
0.3828584	-	1

Map

Pictures

You must sign in to upload images!

Comments

You must sign in to comment

Copyright: CRCB, 2014

The website and the database it is built upon has been financed by EU FP7 Framework Programme, ANTICORRP Programme; tender #290529; beneficiary: Corvinus University of Budapest). This project couldn't have been done without the invaluable help of the volunteers

Discussion points

- Additional red flags?
- How to use the data and indicators in policy making&monitoring?

Network data set-up

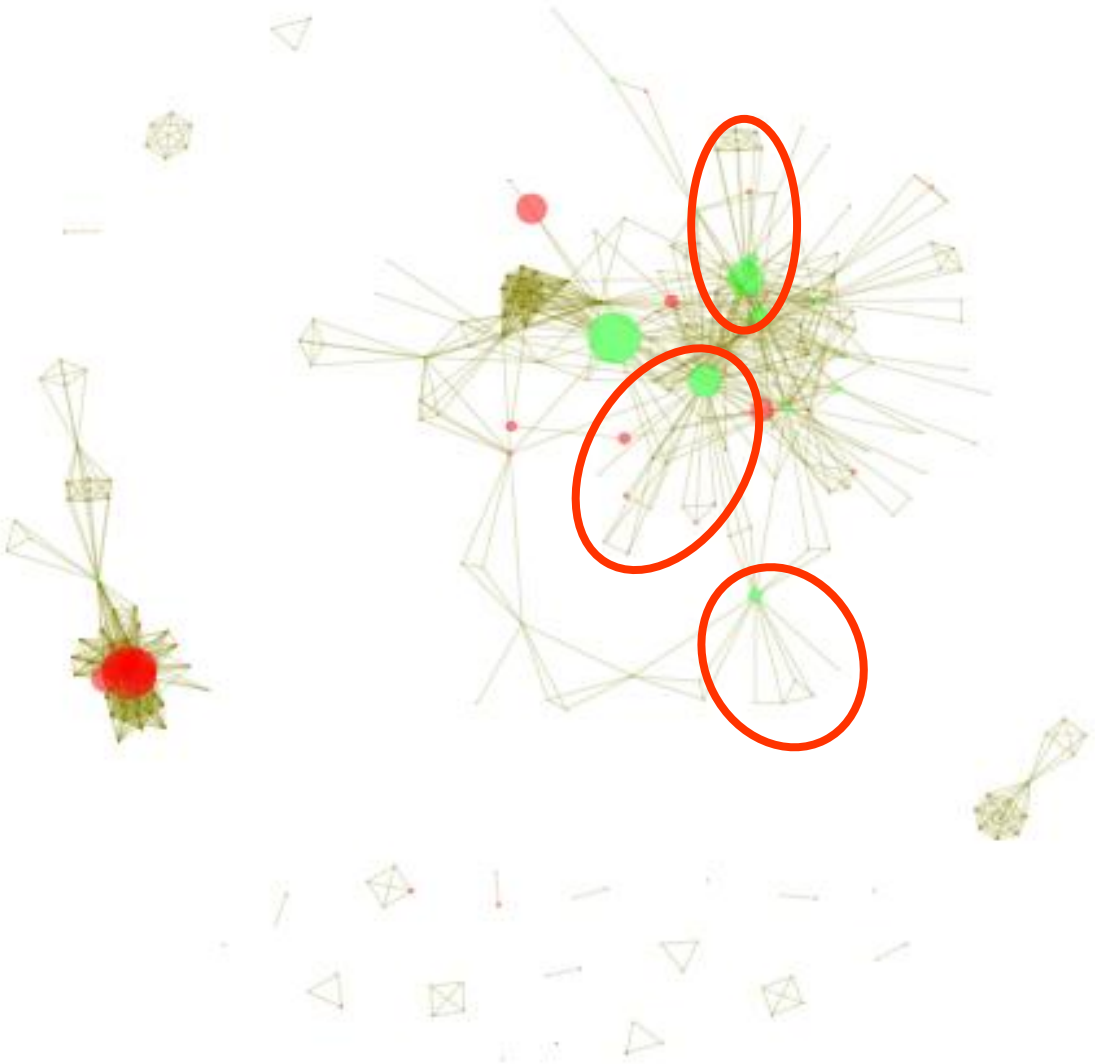
- Co-bidding network
  - Construction work for pipelines, communication and power lines, for highways, roads, airfields and railways
  - 3 regional and 1 national markets in 2007&2009
- Nods: bidding firms (winners and losers)
  - size=number of tenders won
  - colour=network position (green=cut-point)
- Edges: bidding on the same tender
  - width=number of times companies co-bid

Co-bidding patterns: benchmark

- 2007
- Dense networks
- Few cutpoints
- Cutpoints **don't benefit** from position

Co-bidding patterns: suspicion

- 2009
- Dense networks
- Many cutpoints
- **Cutpoints seem to benefit** from position



Further information about this approach

Corruption Research Center Budapest: www.crcb.eu

Fazekas, M. and Tóth, I. J. (2014). *From corruption to state capture: A new analytical framework with empirical applications from Hungary*. CRC-WP/2014:01, Budapest: Corruption Research Centre.

Czibik, Ágnes; Fazekas, Mihály; Tóth, Bence; and Tóth, István János (2014), *Toolkit for detecting collusive bidding in public procurement. With examples from Hungary*. Corruption Research Center Budapest, CRCB-WP/2014:02.

Fazekas, M., Chvalkovská, J., Skuhrovec, J., Tóth, I. J., & King, L. P. (2014). *Are EU funds a corruption risk? The impact of EU funds on grand corruption in Central and Eastern Europe*. In A. Mungiu-Pippidi (Ed.), The Anticorruption Frontline. The ANTICORRP Project, vol. 2. (pp. 68–89). Berlin: Barbara Budrich Publishers.

Fazekas, M., Tóth, I. J. (2014), *Three indicators of institutionalised grand corruption using administrative data*. U4 Anti-Corruption Resource Centre, Bergen, U4 Brief 2014:9.

Fazekas, M., Tóth, I. J., & King, L. P. (2013). *Anatomy of grand corruption: A composite corruption risk index based on objective data*. CRC-WP/2013:02, Budapest: Corruption Research Centre.

Fazekas, M., Tóth, I. J., & King, L. P. (2013). *Corruption manual for beginners: Inventory of elementary "corruption techniques" in public procurement using the case of Hungary*. CRC-WP/2013:01,Corruption Research Centre, Budapest.

Fazekas, M., Tóth, I. J., & King, L. P. (2013). Hidden Depths. The Case of Hungary. In A. Mungiu-Pippidi (Ed.), *Controlling Corruption in Europe vol. 1* (pp. 74–82). Berlin: Barbara Budrich Publishers.