Cronyism in Hungary

Empirical analysis of public tenders 2010-2016

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About the research

- CRCB & IECERS HAS

- First steps from 2010 to 2014; and from 2015 the detailed analysis

- EU 7th Framework (Anticorrp); EU Commission, OTKA (K116860)

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Summary

- Evidence on cronyism in Hungary in the public procurement between 2010-2016

- Higher corruption risks
- Lower intensity of competition
- Lower rate of relative price drop (RPRD ≈ 0)

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Motivations

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Motivations

- Empirical investigation into cronyism in Hungary based on objective data

- Using big data approach

- in the public procurement (one of the main fields of possible corrupt activities)

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Motivations

- statistical comparison
    - of the corruption risks,
    - intensity of competition
    - the strength of price competition

    among tenders won by crony companies and that among tenders won by other, ordinary Hungarian firms.
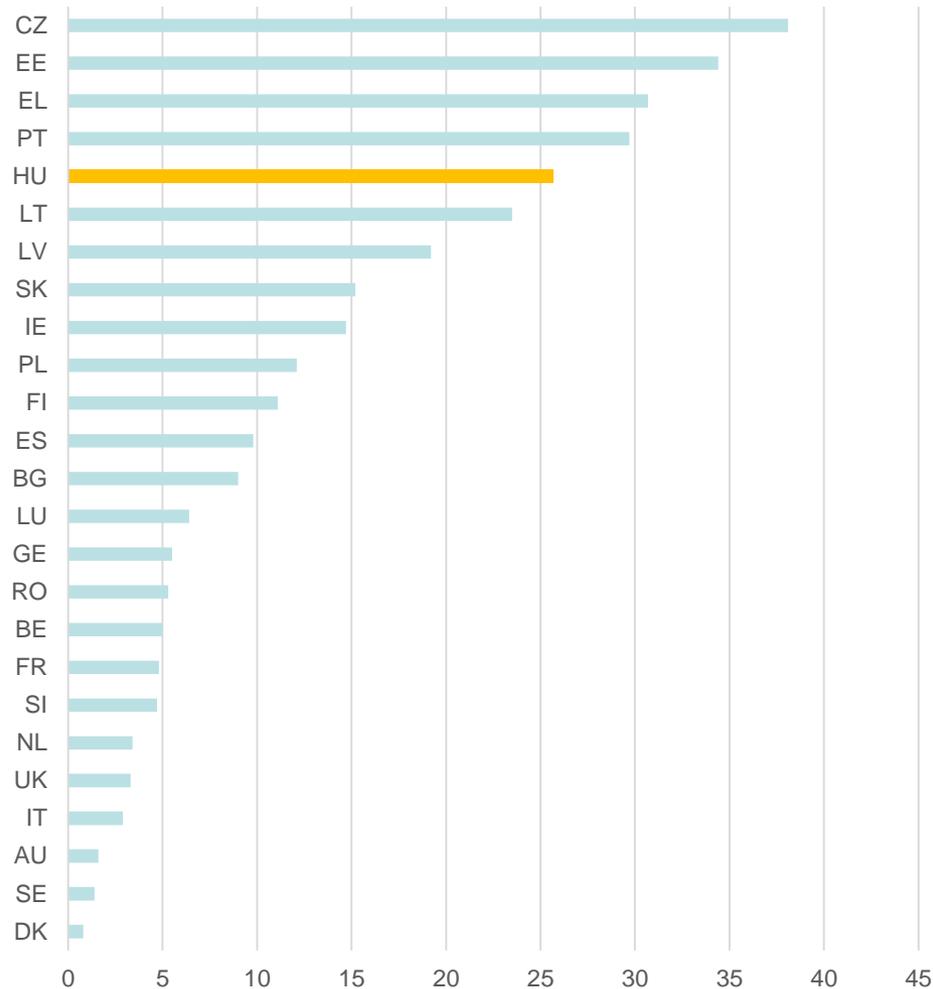
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Fields of corruption
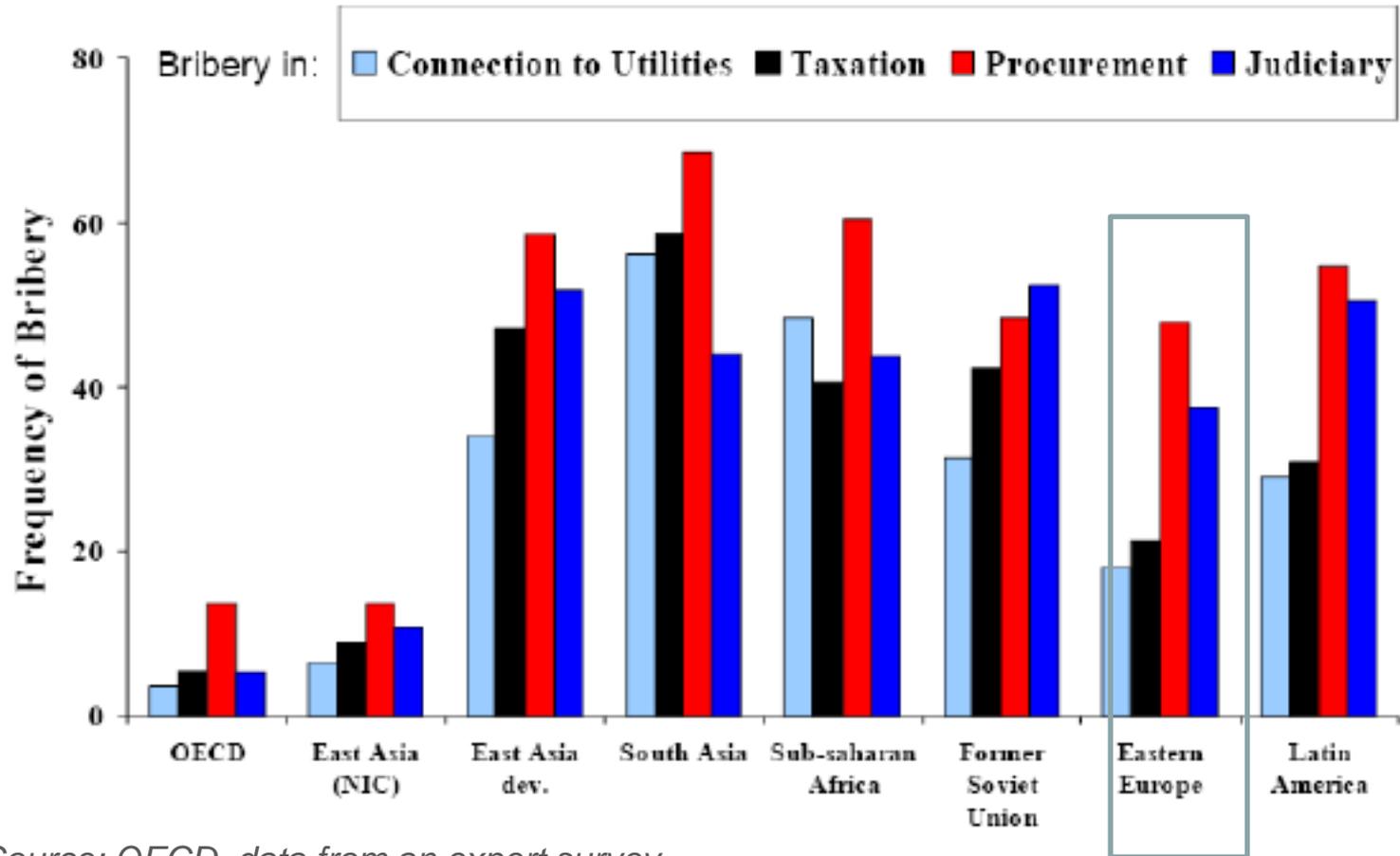
Source: OECD, data from an expert survey

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Fields of corruption

- One of the most important fields of *grand corruption*

- In Hungary 15-20% of GDP

- cca. 15-20 Billion Euros per year

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Share of EU funded PP in total number of PP in European countries, 2009-13, N = 1,777,955

Source: TED,
calculation by CRCB

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Theoretical background & literature

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Background

- *Autocracy*

    Kornai described the autocratic characteristics of the Hungarian state administration and

    the peculiar nature of the Hungarian 'autocratic capitalism':

    the real aim of the regime is to strengthen the position of political power holders in the business realm.
    (Kornai, 2016)

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Background

- *Modern dictatorships* – without mass repression

  Sergei Guriev and Daniel Treisman argue that
  in modern authoritarian regimes the dictators use propaganda and rewards instead of mass repression

  the repression is not cost-effective—it makes more sense to spend money on rewards and propaganda

  (Guriev and Treisman, 2015)

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Background

- *Grand corruption and corrupt systems*

  the corruption of high level officials / business holders

  and where the corruption is systematic

  (Rose-Ackerman, 1978; Lambsdorff, 2007).

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Background

- *Cronyism and kleptocratic system / state*

  cronyism: when the state allocates its resources to the individuals and groups closely related to its leader
  (Haber, 2002).

  The extreme case of the cronyism is the *kleptocratic system* when par excellence the political leaders, their fronts and their families will be the beneficiaries the state then becomes an extortionary or kleptocratic state
  (Rose-Ackerman, 1999).

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Empirical evidences on crony systems

- From Africa,

- Latin-America

- Asia

(Harm and Charap, 1999; Haber, 2002; Kang, 2002; Diwan, Keefer and Schiffbauer, 2015; Nucifora, Churchill and Rijkers, 2015; Rijkers, Freund and Nucifora, 2017)

- Hungary

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Indicators & data

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Indicators

- Corruption risk

- Intensity of competition

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Corruption & Corruption risks

- Corruption:

    – "misuse of the powers of Public officials (appointed or elected) for private financial or other benefits" (OECD)

    – micro level phenomenon

    – a transaction between two or several actors

    – hidden in both side (seller and purchaser)

    – a sign of the lack of integrity in an institution / institutions or in a whole institutional system

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Corruption & Corruption risks

- Corrupt activity in public procurement:

  – Limit the competition / intensity of cometition

  – To achieve monopolistic position

  – Creating corruption rent ($P_{corruption} > P_{market}$)

  $$(P_{corruption} = P_{market} + R_{corruption})$$

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Corruption & Corruption risks

- Corruption risks relate to the existence of favourable conditions of corruption

- The actors who want to behave in a corrupt way will create the conditions which meet the planned corrupt transaction

- Corruption risks measure the extent to which effective conditions for corruption have been created

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Intensity of competition

- Micro phenomenon

- From weak competition to strong competition

- The strength of competition is measurable at transaction level

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Indicators: corruption risks

1. Single bidder *(SB); [0,1]:*

the tender is competitive or non-competitive

(Coviello & Gagliarducci, 2010; OCDS, 2017; Heggstad et al. 2010; Fazekas et al. 2013b; Fazekas et al. 2016; Tóth-Hajdu, 2017).

SB = 1 if the tender was conducted with only one bid

SB = 0 if there were more than one bid

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Indicators: corruption risks

2. *CR3; [0, 0.33, 0.66, 1]:*

components:

      1. SB

      2. open vs. not open tender

      3. contract price rounded by 10.000 or not

(Nigrini, 2012; Kossovsky, 2015; Fazekas et al. 2013b; Fazekas et al. 2016; Tóth – Hajdu, 2016; Tóth-Hajdu, 2017).

      CR3 = 0 means low corruption risk,
      CR3 = 1 means high corruption risk

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Indicators: intensity of competition

3. *ICI (index of competition intensity):*

The ICI is related to the number of bids (NB). ICI has missing value if NB = 1, because we assume that if there is only one bid, then there was no competition that could be measured.

$$ICI = \lg NB \qquad\qquad \textit{if 1 < NB ≤ 10}$$

$$ICI = 1 \qquad\qquad \textit{if 10 < NB}$$

0.301 ≤ ICI ≤ 1

(Tóth – Hajdu, 2016; Tóth-Hajdu, 2017).

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Indicators: price competition

4. *RPRD (relative price drop)*

The estimated value is determined by the issuer and indicates the highest price that was estimated based on a market analysis, and sometimes it could also signal how much money was available to implement the project.

$$RPRD = \frac{(P^* - P)}{P} * 100$$

if P* > P and RPRD < 100

(cases in which RPRD≥100 were excluded from the calculations because we assume that they are affected by data inconsistencies)
where P* is the estimated net value and P is the net contract value.

If RPRD ≈ 0, the contract prices are close to the estimated value, then this should be interpreted as a 'red flag', a sign of possible corruption

(Heggstad et al. 2010)

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Crony companies: the MGTS group

5. MGTS [0,1]: the companies owned by Orban's cronies

Lőrinc **M**észáros

A close childhood friend of the Hungarian Prime Minister; a gas fitter; the mayor of Felcsút (the village where Viktor Orbán spent his childhood). A Hungarian billionaire since 2013 (http://bit.ly/1nKficQ). Many experts assume that he serves as a front (straw man) for Viktor Orban's business dealings (http://on.ft.com/2BSL2qp and http://bit.ly/2Dy7R09). While he was an ordinary citizen without any considerable wealth in 2009, according to estimates by Forbes Hungary in 2017, his wealth had reached $392 million (http://bit.ly/2DBEeLq, http://bit.ly/2DAnk05, http://bit.ly/2E7pEMZ and http://bit.ly/2GeKF97).

Istvan **G**arancsi

Hungarian businessman, owner of the Videoton FC football team, president of the Hungarian Association of Hikers; close friend of Viktor Orbán's (http://bit.ly/2DIKt3p). Many assume that he serves as a front for Viktor Orban's business dealings (http://bit.ly/2DMIprv and http://bit.ly/2Bs57jc).

István **T**iborcz

Hungarian lawyer and businessman; son-in-law of Viktor Orbán, Hungary's prime minister (http://bit.ly/2DxhgoN).

Lajos **S**imicska

Hungarian businessman, owner of Hungarian TV news channel Hír TV and one of Hungary's leading dailies, Magyar Nemzet; Hungary's 11th richest person estimated by napi.hu on its list of the 100 richest Hungarians; Viktor Orbán's dormitory roommate. Later, he held several positions: Fidesz treasurer, President of the Hungarian Tax Office, and general manager and CEO of Mahir, one of the market leaders in advertising in Hungary. He fell out with Viktor Orbán on 6th February 2015 (http://politi.co/2rBxFap and http://bit.ly/2dY2TA4).

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Data

- Public Procurement Database built by CRCB

- Period of time: 2010-2016

- 126,330 contract (without framework agreements)

- Dates, CPV codes, contract value, estimated contract value, number of bidders, name of winners, EU funds [0,1]
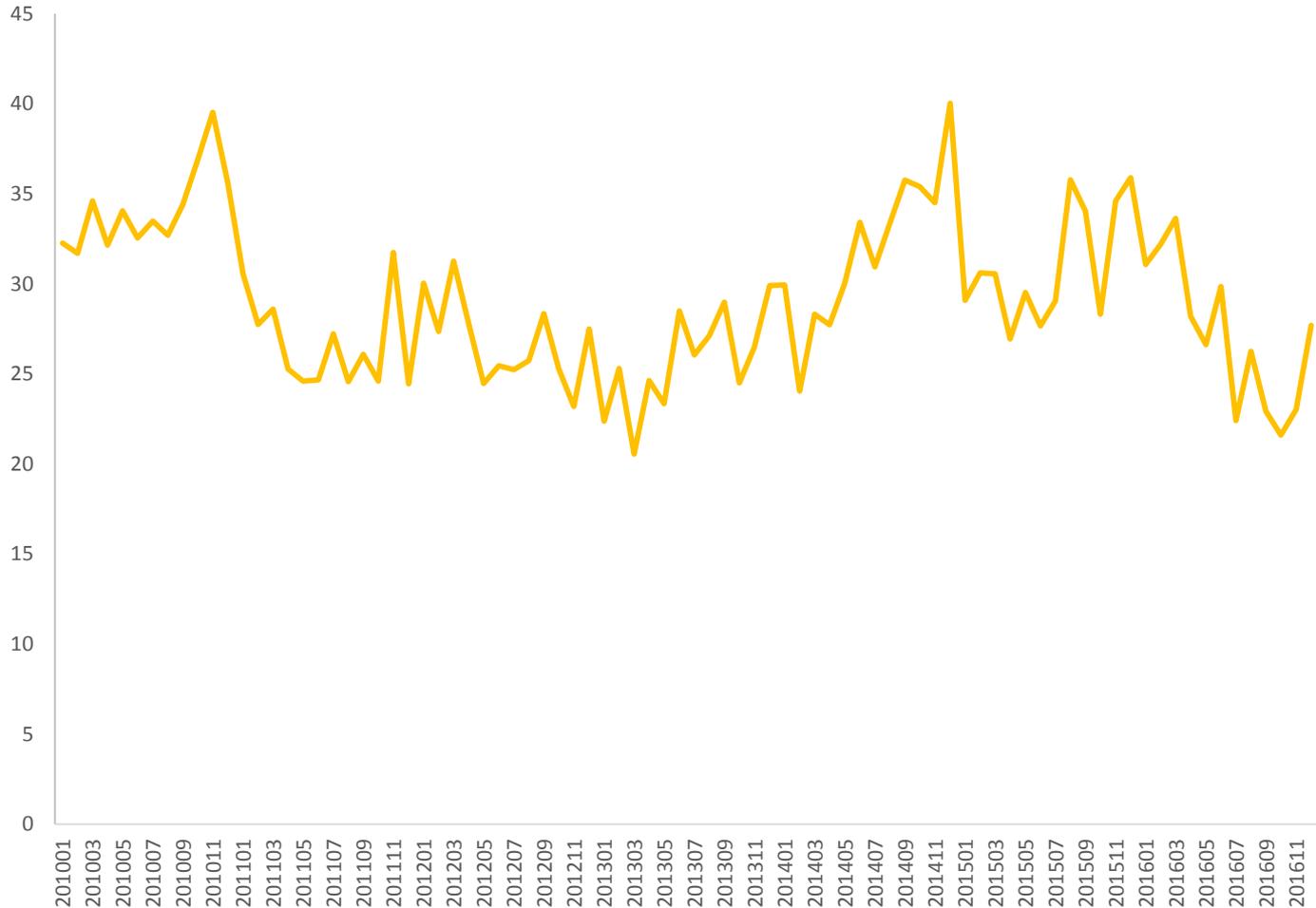
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Number of contracts by year, 2010-2016, N=126,330

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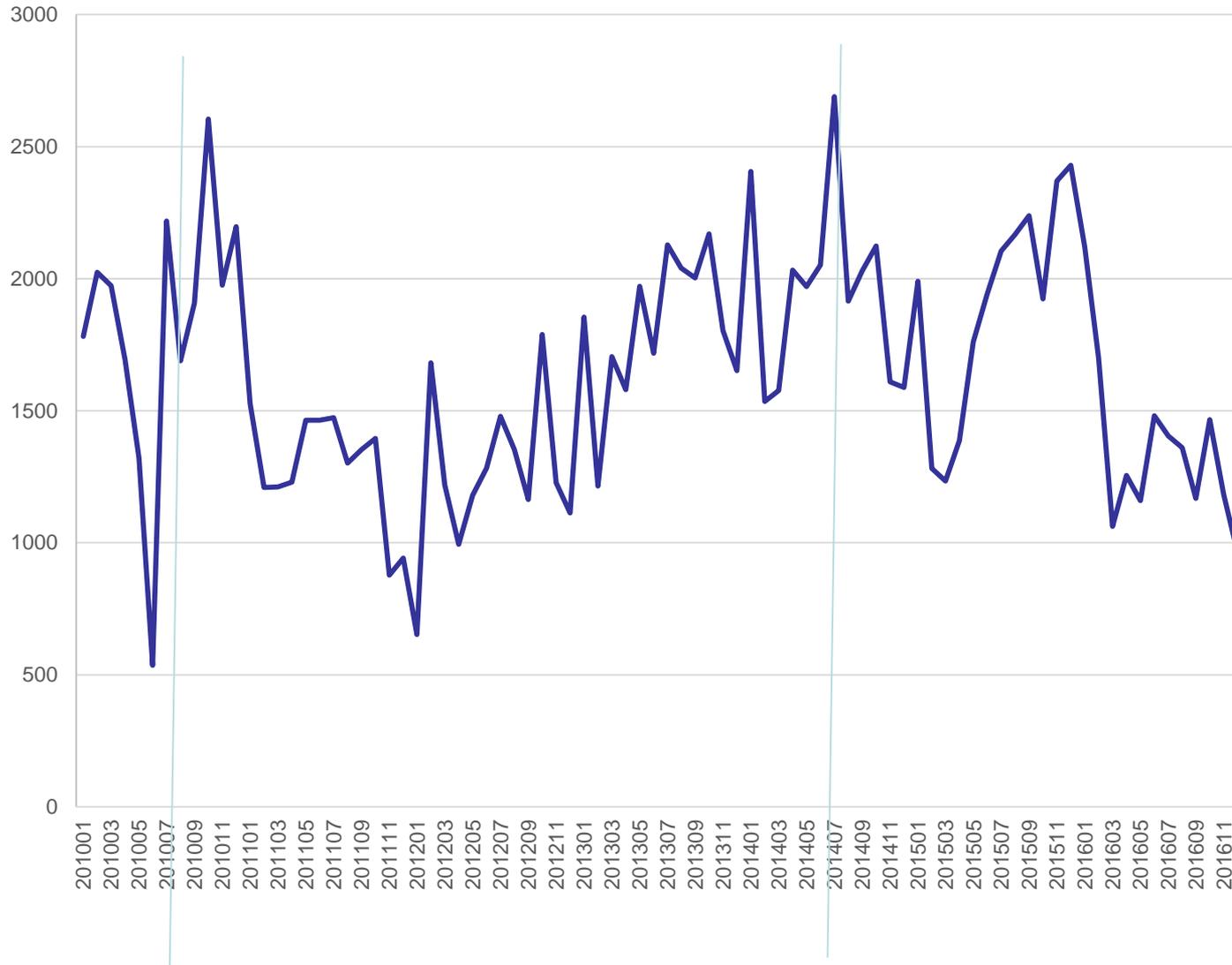
Share of contracts with single bidder, 2010-2016, %, N=125,066

Median: 0.0000
Mean: 0.2947
St.dev.   0.4559

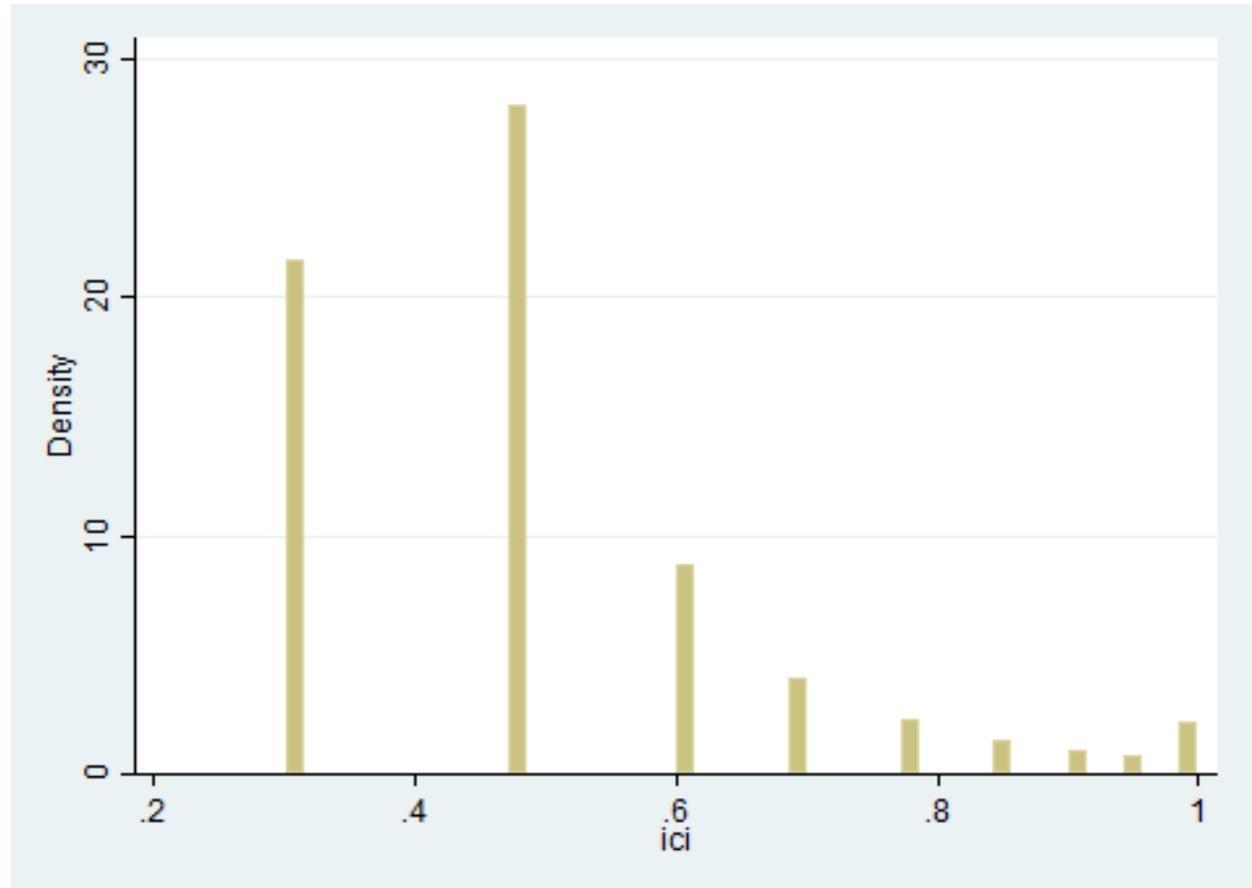N: 125,066

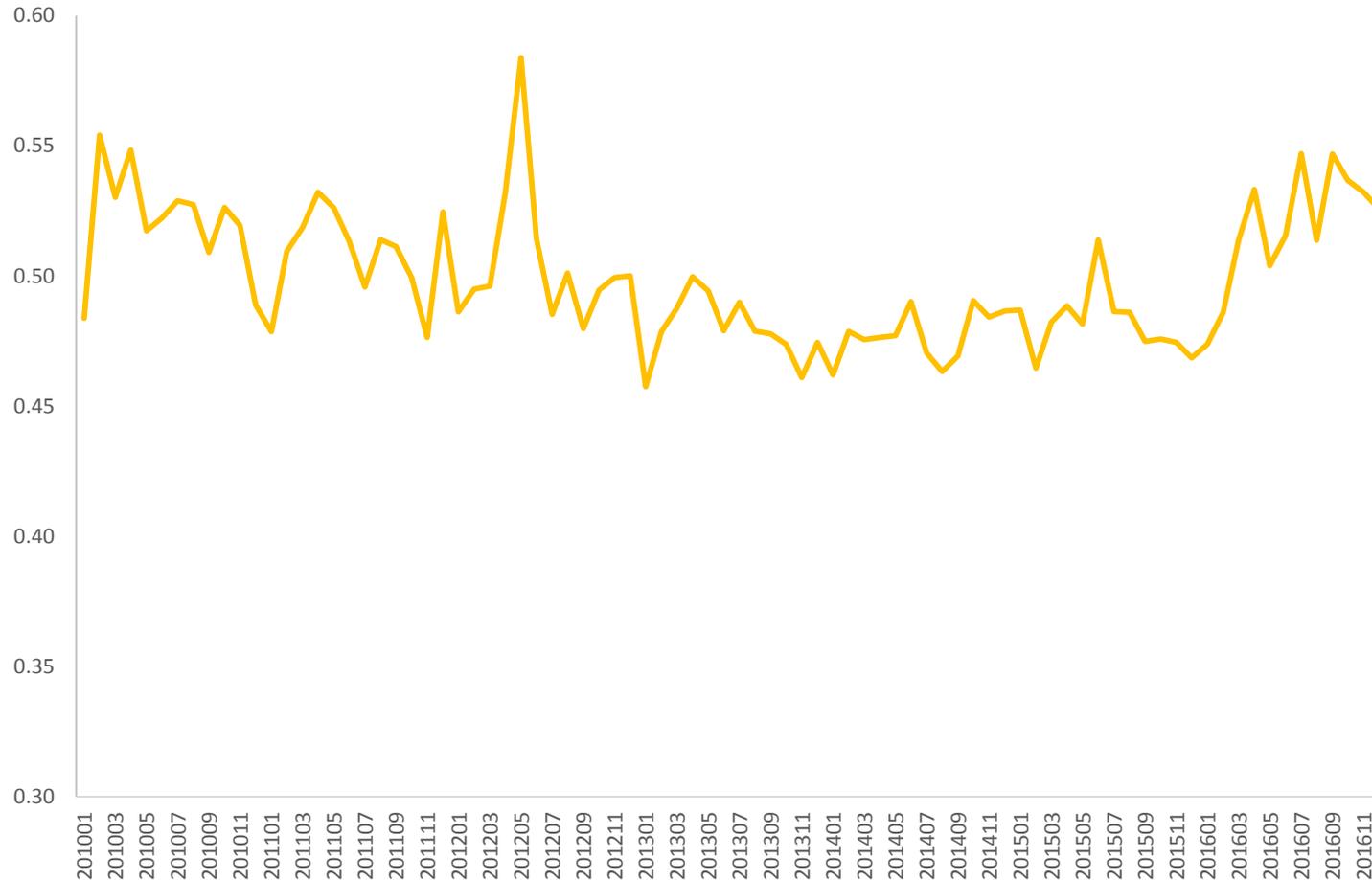CORRUPTION
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Histogram of ICI, 2010-2016, N = 87,464

Median: 0.4771
Mean: 0.4964
St.dev.   0.1825

N: 87,464

Mean value of ICI by months, 2010-2016, %, N = 87,464

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Histogram of RPRD, 2010-2016, N = 69,010

Median: 2.6574
Mean: 11.7377
St.dev.   18.5909

N: 69,010

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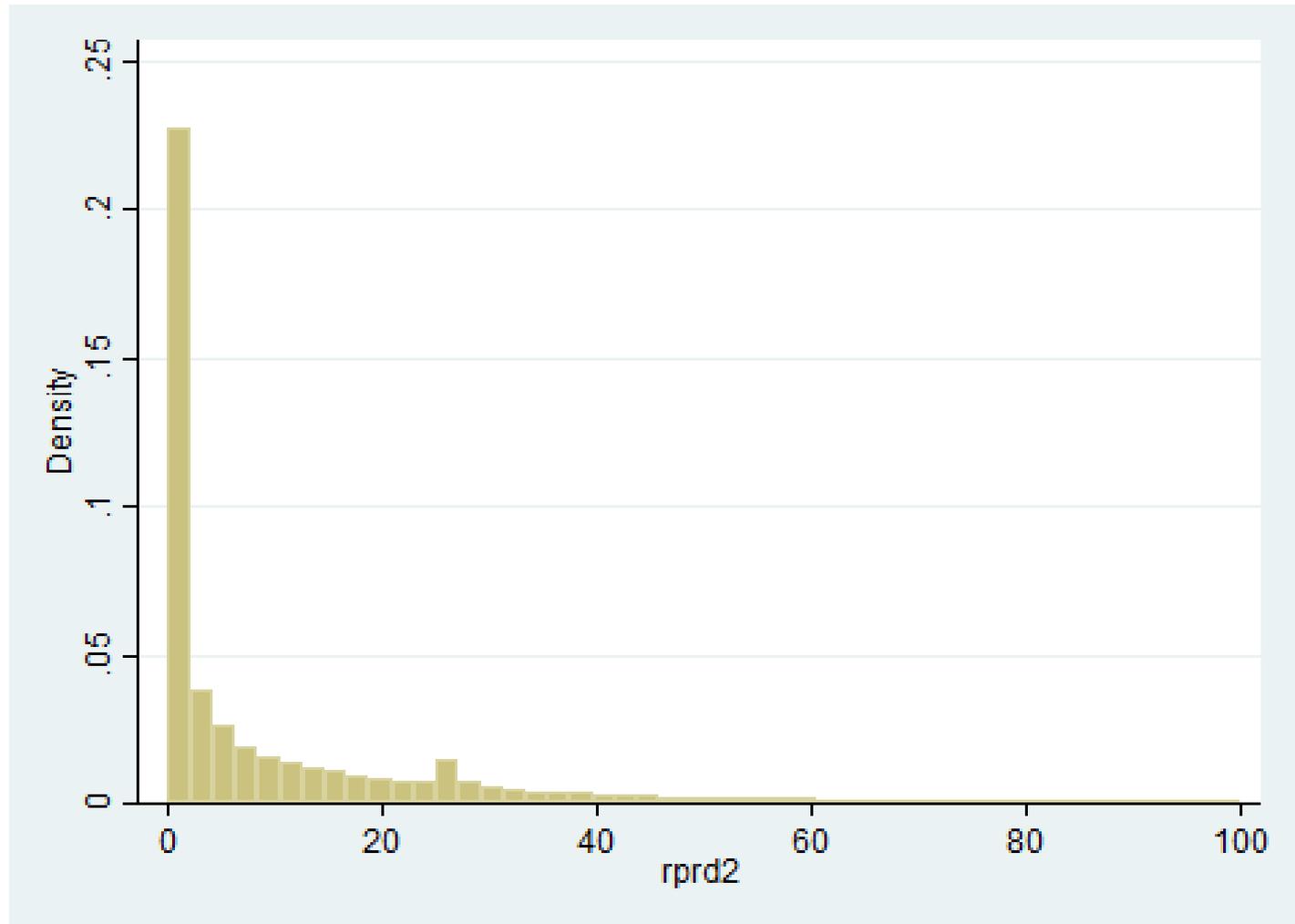
Median value of RPRD by months, 2010-2016, N = 69,010

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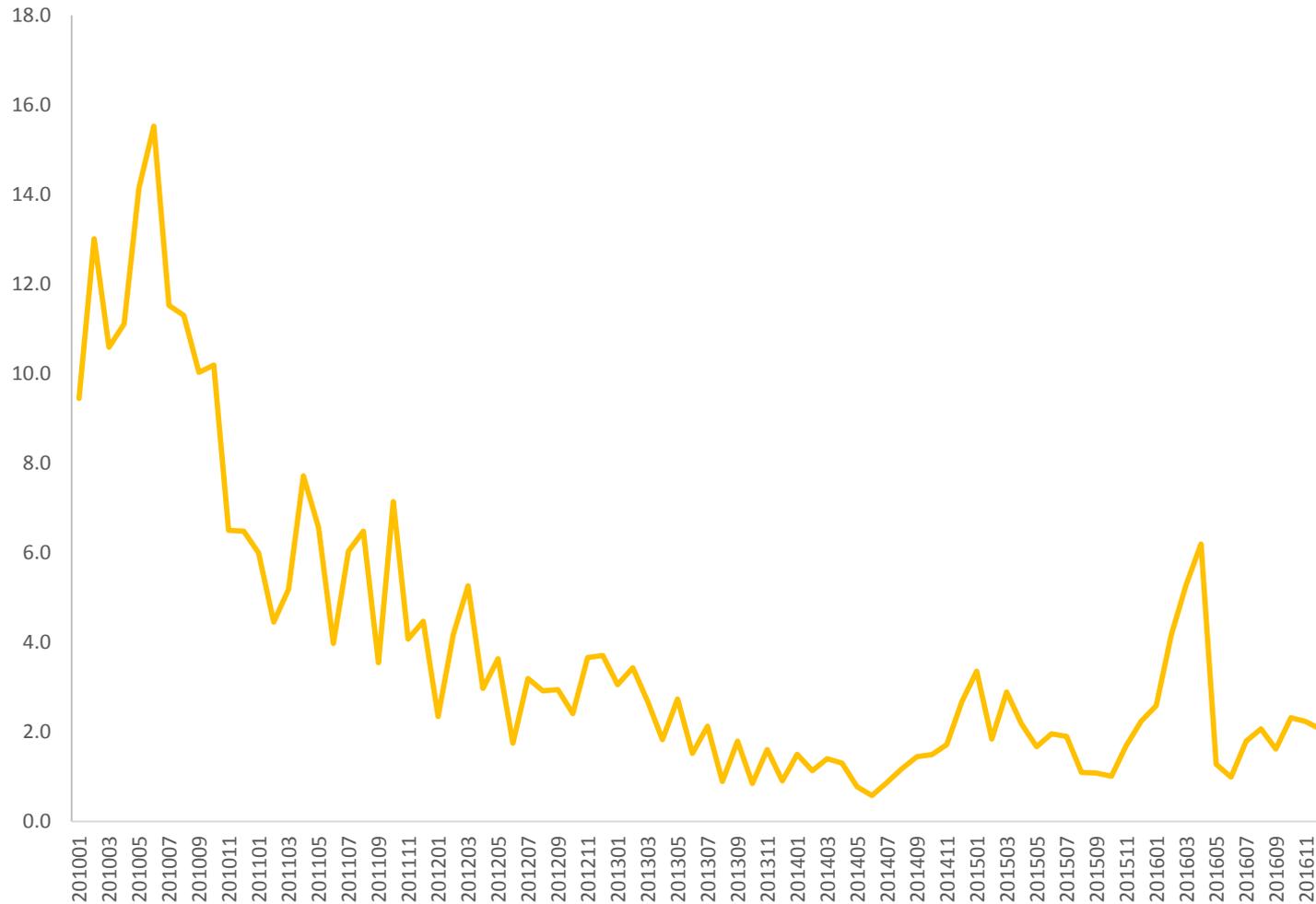
Median value of RPRD by CR3 and number of bidders, 2010-2016, N = 68,725

Number of bidders	Corruption risks (CR3)			
	0	0.33	0.66	1
1		3.81	0.63	0.04
2	11.06	2.57	0.80	
3	12.57	1.66	0.96	
4	16.86	4.90	0.89	
5	20.07	10.62	3.44	
6 or more	23.01	7.70	0.00	
N	13,929	28,902	21,671	4,223

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The weight of MGTS
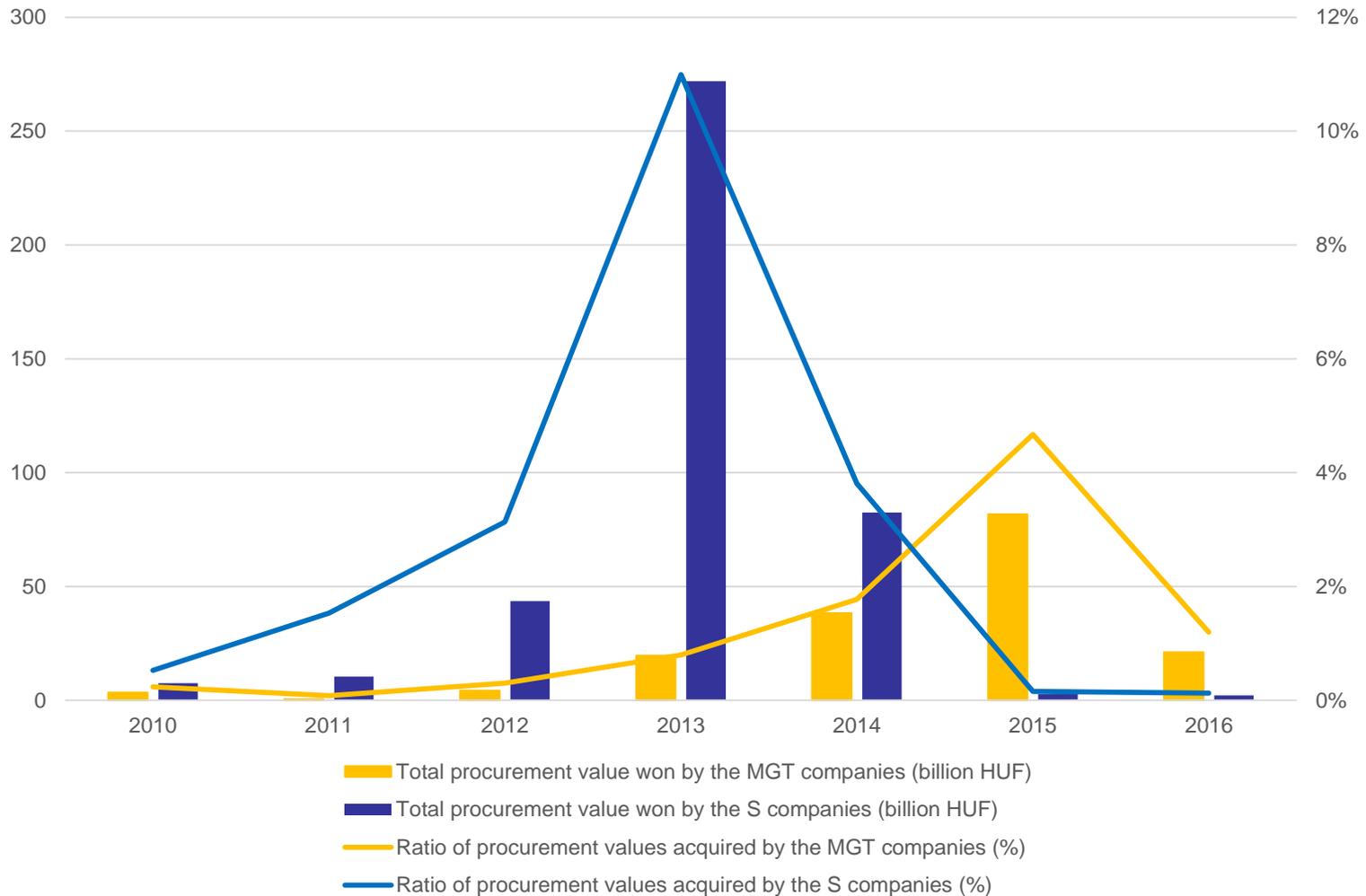
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Weight of the MGTS group

- Won 510 contracts out of 126,330 (0.4%)

- $2.5 billion out of $49.3 billion on public procurement;

- 5.1% of the total value of public procurement between 2010-2016

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Value and share of contract won by MGTS in total value of contract by years, 2010-2016, N=123,649

Legend:
- **Total procurement value won by the MGTS companies (billion HUF)** — yellow bars
- **Ratio of procurement values acquired by the MGTS companies (%)** — orange line

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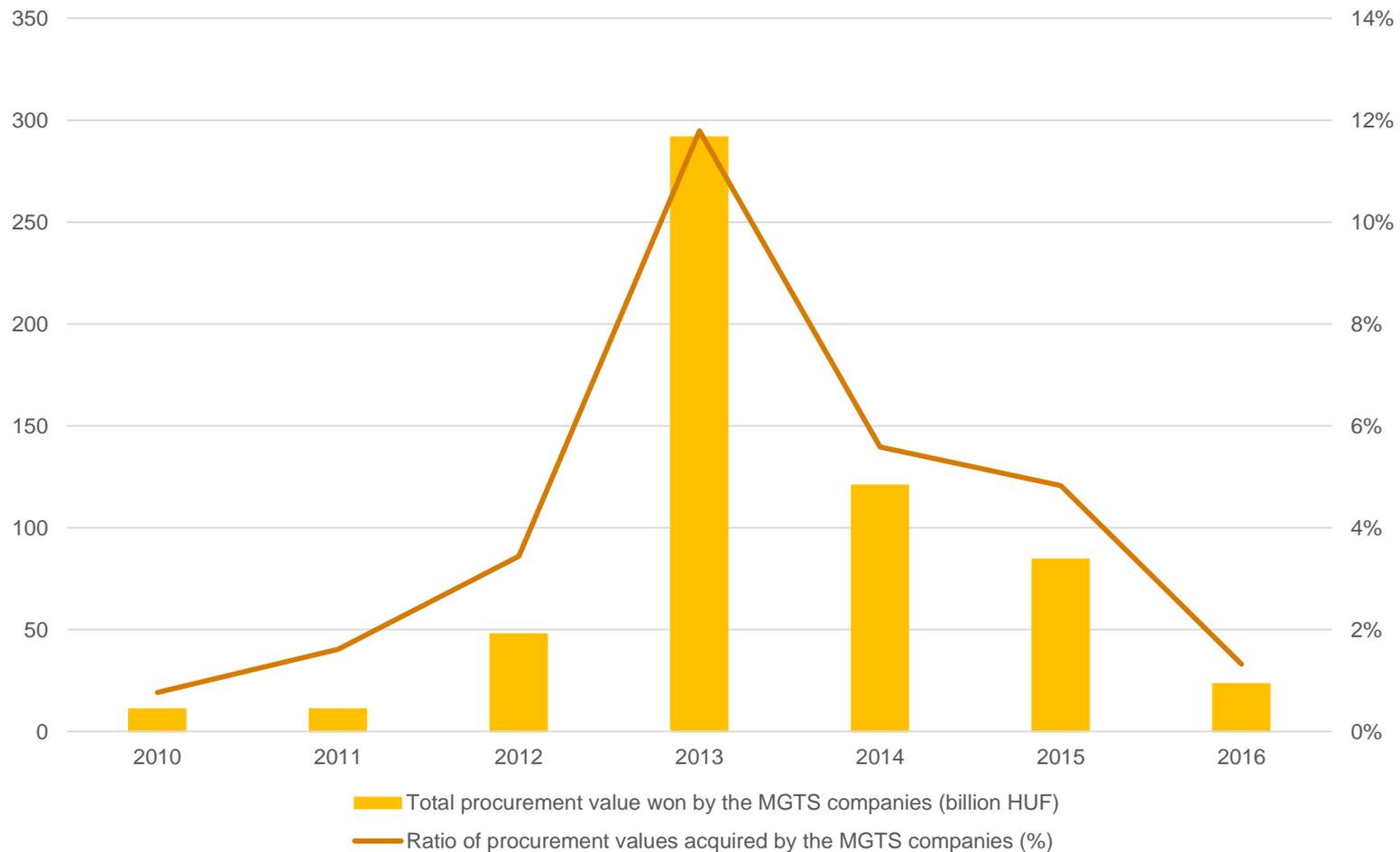
Value and share of contract won by MGT and S in total value of contract by years, 2010-2016, N=123,649

Total procurement value won by the MGT companies (billion HUF)

Total procurement value won by the S companies (billion HUF)

Ratio of procurement values acquired by the MGT companies (%)

Ratio of procurement values acquired by the S companies (%)

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Value of EU funded and Hungarian funded projects in total contract value by type of winners, 2010-2016, N=123,649

ordinary Hungaraian companies
46.1 | 53.9

MGTS companies
73.4 | 26.6

0.0   20.0   40.0   60.0   80.0   100.0   120.0

■ EU funded   ■ funded by Hungarian taxpayers

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Models

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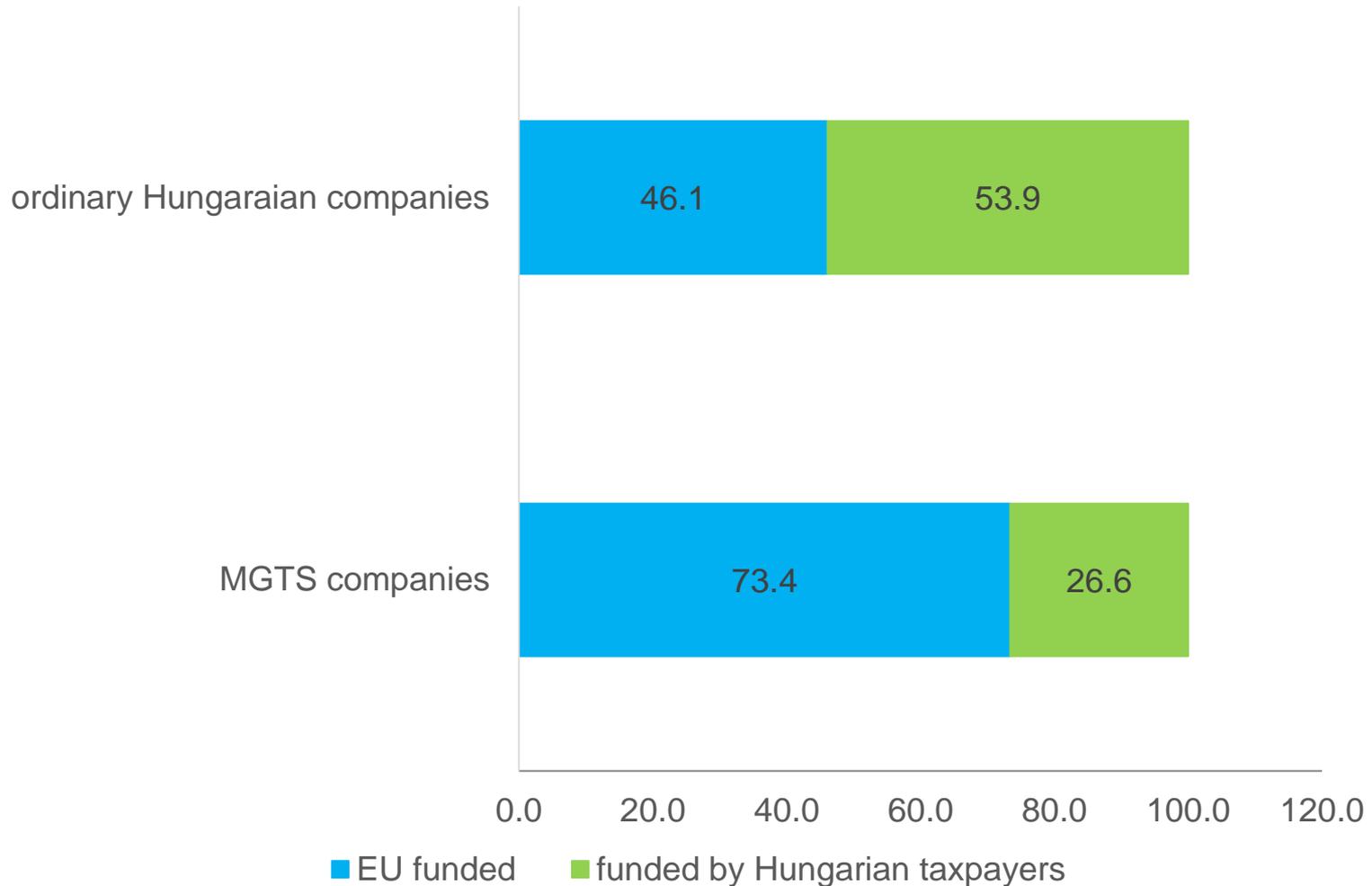
Hypothesis

H0: There are no significant differences among tenders won by MGTS and other ordinary Hungarian companies concerning

Corruption risks (SB)

Intensity of competition (ICI)

Relative price drop (RPRD)

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Hypothesis

H1: The MGTS' companies won tenders with highest corruption risks, lower competitive intensity and lower value of RPRD than the ordinary Hungarian companies

→ evidence of political favouritism & cronyism

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Models

SB $= f$ (MGTS, X)

ICI $= f$ (MGTS, X)

RPRD $= f$ (MGTS, X)

$$ERPRD = \beta_0 + \beta_1 CR3 + \beta_2 NB + \beta_3 SECTOR + \varepsilon$$

ERPRD $= f$ (MGTS, X)

The controls (X) are year; EU [0,1]: EU funding; lnC: logarithm of contract value; S [1,2]: construction vs. other sector

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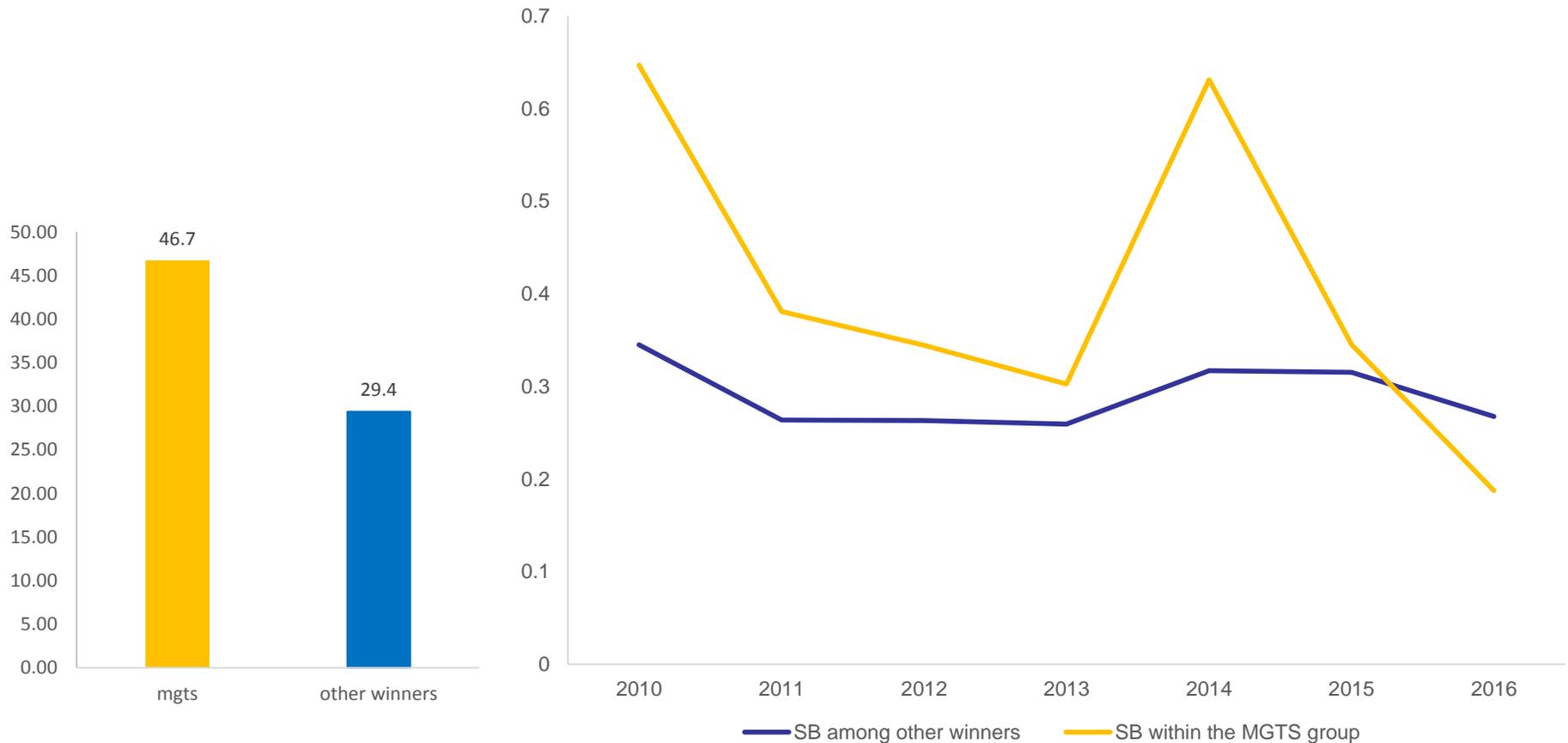RESEARCH CENTER
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Method used

Propensity Score Matching (PSM)

to avoid the selection bias

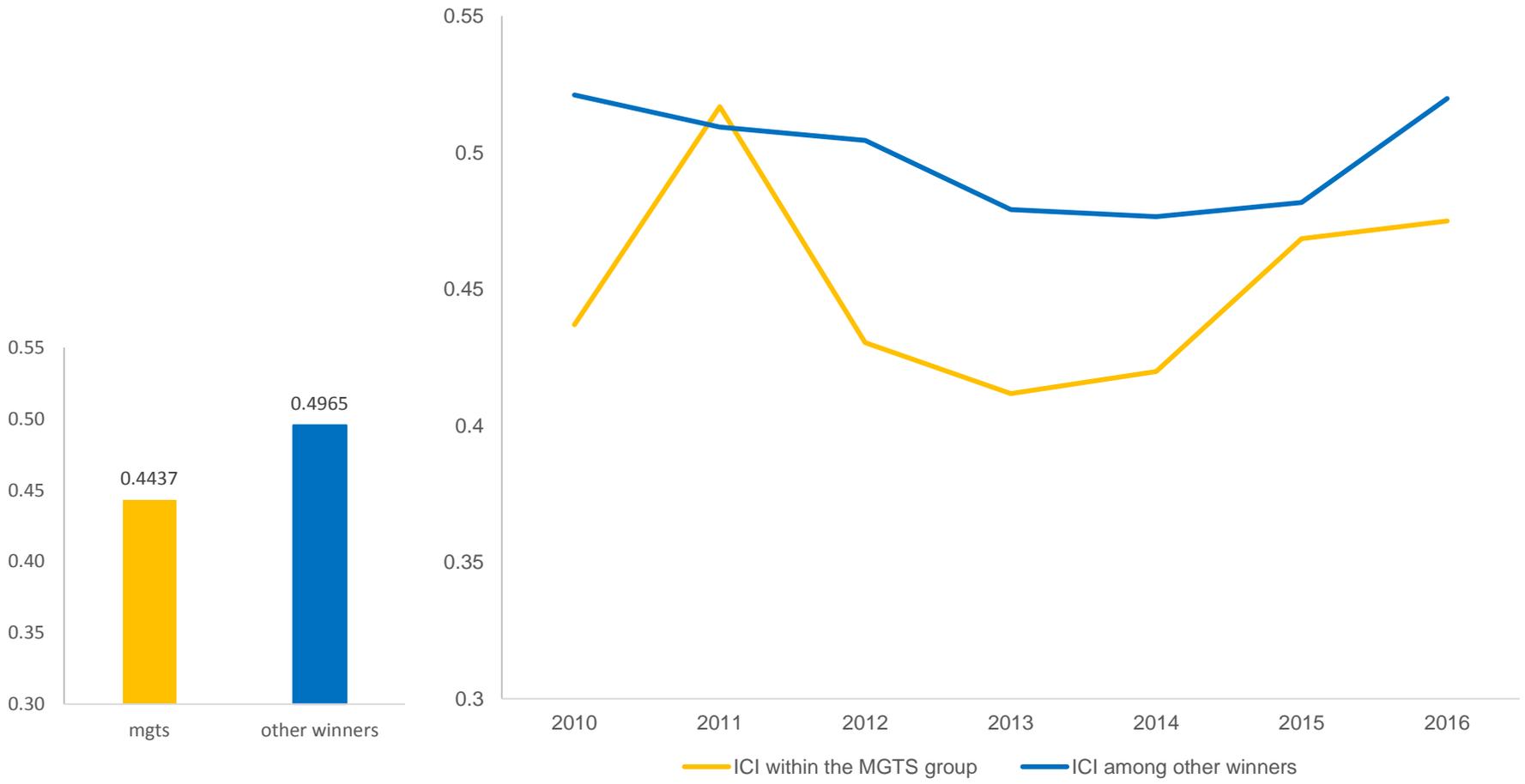*(our previous research shows that MGTS has chosen special group of tenders:*

a) financed by EU funds
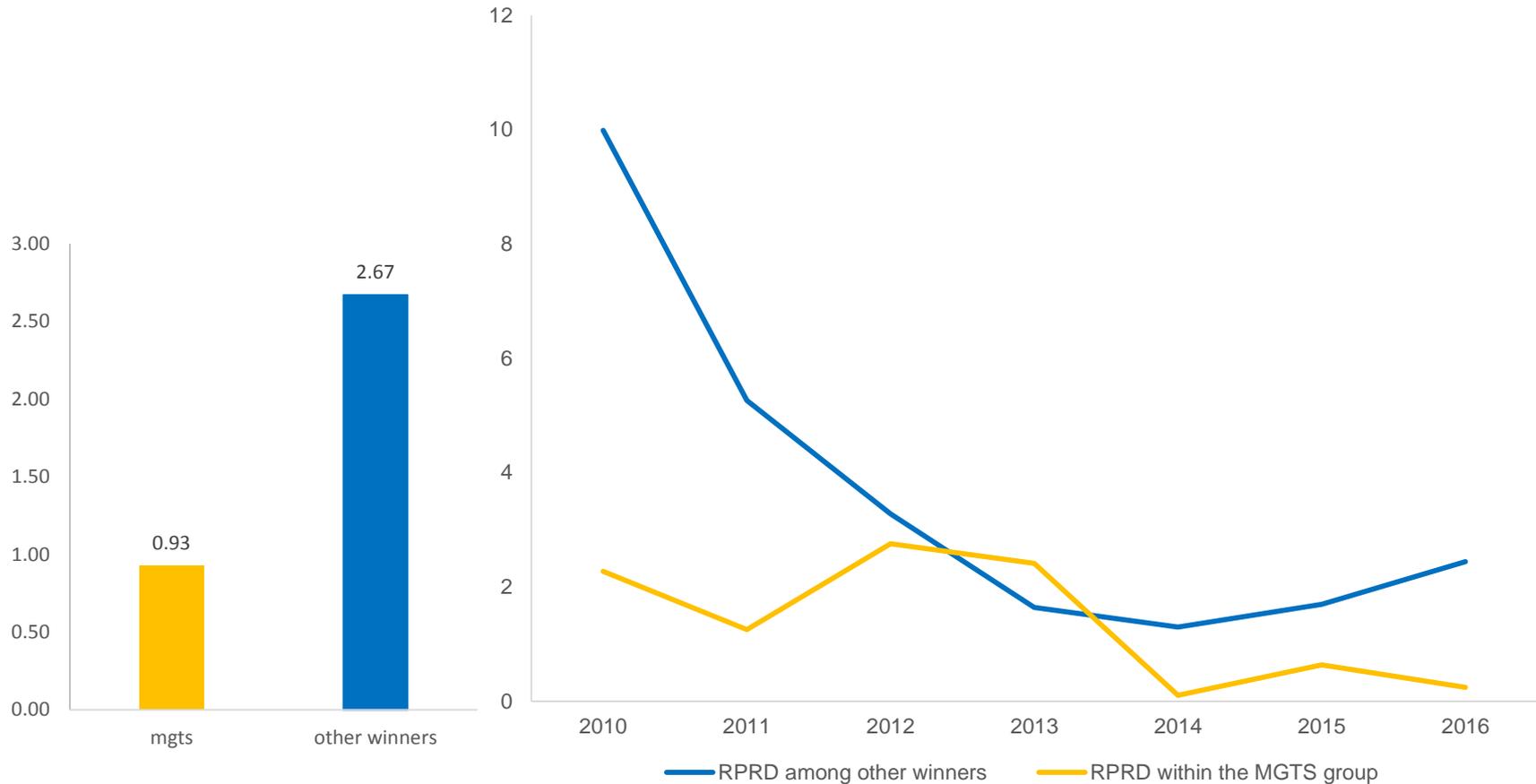
b) large projects

c) in construction sector)

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Results

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Corruption risks (SB), mean values

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Intensity of competition (ICI), mean values

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Relative price drop (RPRD), median values

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The median value pf RPRD in several groups of winners, 2010-2016, N =69,010

Tenders with zero corruption risks and high level of competition	23.7
Tenders wit at least four bidders and at non maximum level of corruption risks	20.2
István Garancsi	5.9
Lajos Simicska	1.5
MGTS	0.9
István Tiborcz	0.7
Lőrinc Mészáros	0.1
Non-competitive tenders with maximum level of corruption risks	0.5

0.0   5.0   10.0   15.0   20.0   25.0

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Estimations

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Result of PSM estimations, 2010-2016

	Corruption risks (SB)	Intensity of competition (ICI)	Relative price drop (RPRD)	Estimated relative price drop (ERPRD)
MGTS	0.190***	-0.067***	-2,526*	-1.159***
Sector	Y	Y	Y	Y
EU	Y	Y	Y	Y
LNNCV	Y	Y	Y	Y
YEAR	Y	Y	Y	Y
N	122,582	85,658	68,823	119,240

***: $p < 0.01$ **: $p < 0.05$ *: $p < 0.1$

Discussion

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Discussion

- MGTS group as winner ← political favouritism

- Higher corruption risks
- Lower intensity of competition
- Lower rate of relative price drop (RPRD ≈ 0)

- Evidence on cronyism in Hungary in the public procurement between 2010-2016

- Cronyism & kleptocratic system = destruction of competition => negative effect on the economic performance

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Discussion

- Estimation of rent /social loss due to cronyism

- Detection of collusion / effects of consortiums on corruption and intensity of competition

- In wider perspective other channel of cronyism needs to be considered:

  - Restriction of the entry to the market
  - Market allocation to the cronies
  - Preferential loans
  - Discounted sale of state property
  - Tax policy, tailor made taxation
  - Fines & penalties against the „hostile companies"
  - Enforcement of exit, etc.

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Thank you for your attention!

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