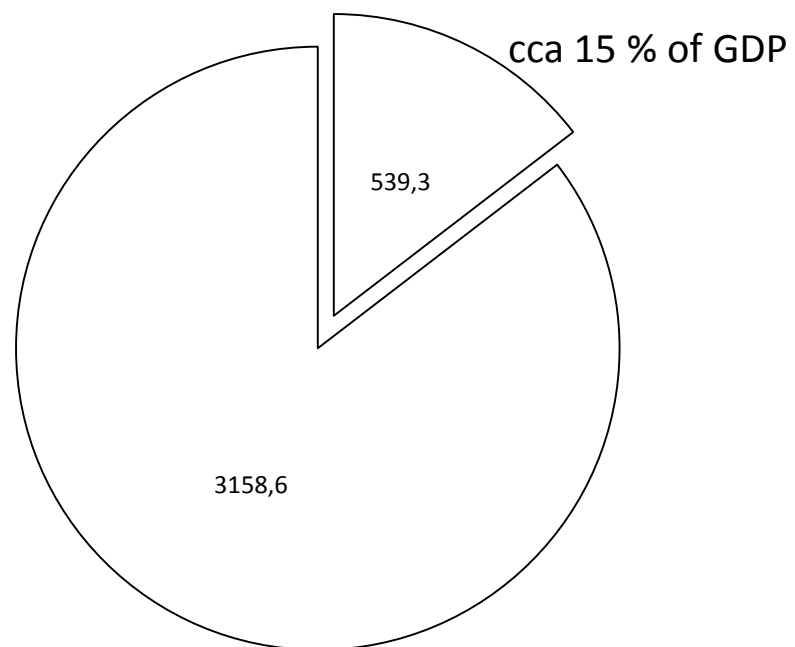


Political connections in public procurement: a supply side analysis

Policy research seminar

Jiří Počarovský, 10. 4. 2014

Public procurement: GDP share



GDP and public procurement volume, CZK bil.

	2006	2007	2008	2009	2010	2011
PP volume	550	474	535	583	594	496
GDP	3 353	3 663	3 848	3 739	3 775	3 809

Donations to Czech political parties

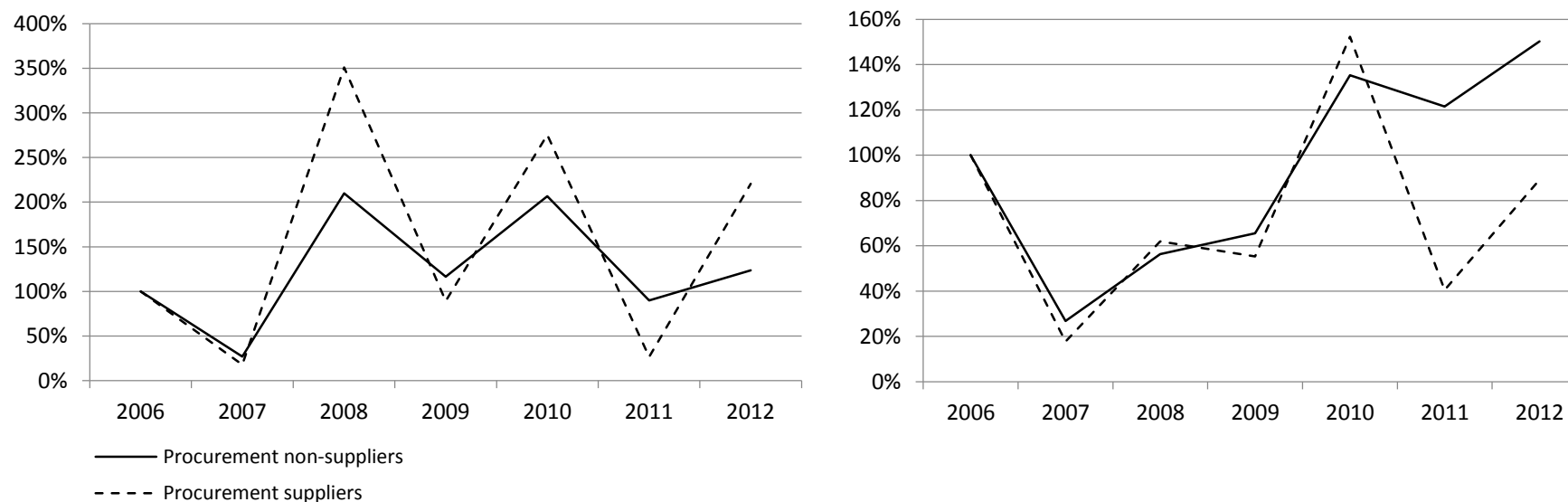
Donations to Czech political parties made by legal entities in 2006 - 2012

	2006	2007	2008	2009	2010	2011	2012
Procurement non-suppliers	84 472 965	22 666 506	47 601 933	55 347 064	114 322 403	102 609 890	126 94 266
Procurement suppliers	17 625 229	3 108 956	10 917 391	9 750 383	26 850 514	7 126 193	15 722 638

Source: politickefinance.cz

Note: Bold figures highlight election years.

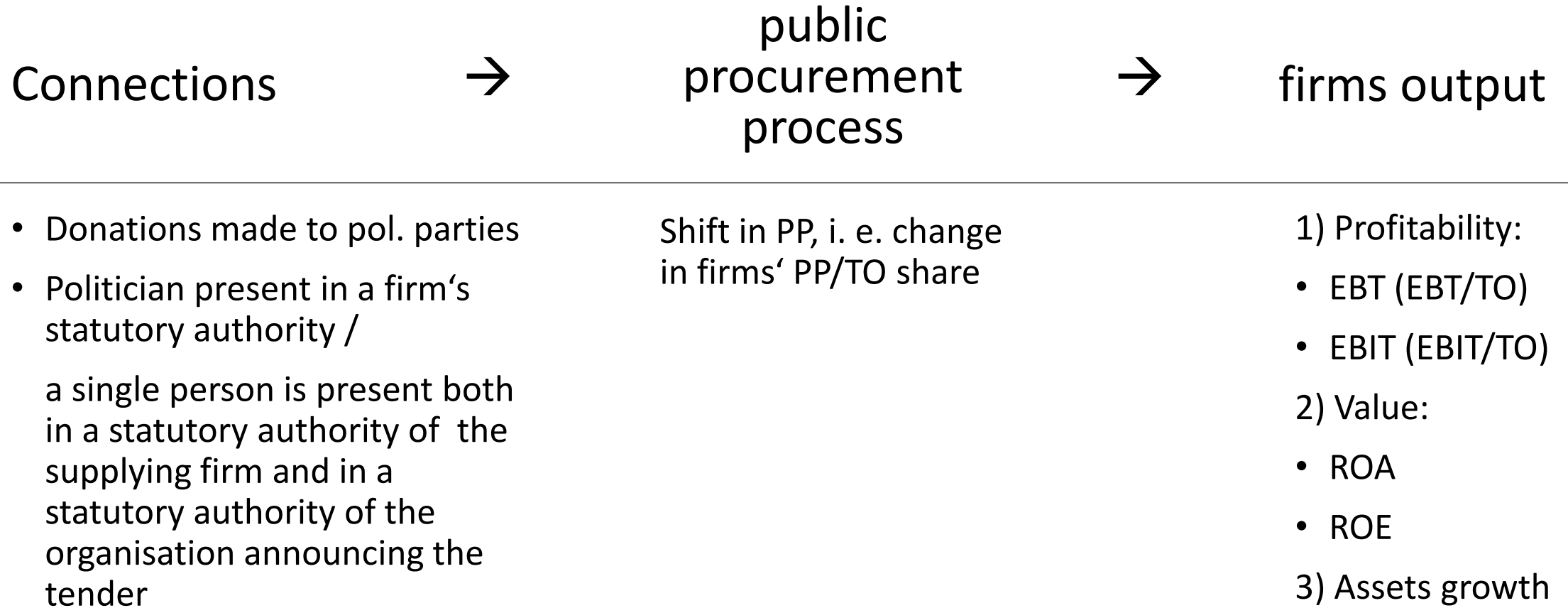
Donations to Czech political parties made by legal entities in 2006 - 2012; y-o-y basis (left diagram); percentage of 2006 volume, year 2006 = 100% (right diagram)



Political connections related literature

- Stratman (1995): significant correlation between political cycle, level of campaign donations and their timing (US data)
- Jayachandran (2006): impact of an unanticipated leaving of U. S. Senator Jim Jeffords on firms' outcome; „Jeffords effect“(US data)
- Dombrovsky (2010): firms donating a party that failed to get re-elected lost nearly a quarter of their revenues (Latvian data)
- Cingano & Pinotti (2009): change of allocation of public goods may reach up to 20% in favour of politically connected firms (Italian data)
- grabbing hand hypothesis; Frye & Shleifer (1997): *“the private returns to political connections are obtained by distorting the allocation of public expenditure”*
- Red tape costs hypothesis, Bellettini et al. (2009): *“knowing the right person in the right place”*

Motivation



1) Connections → PP

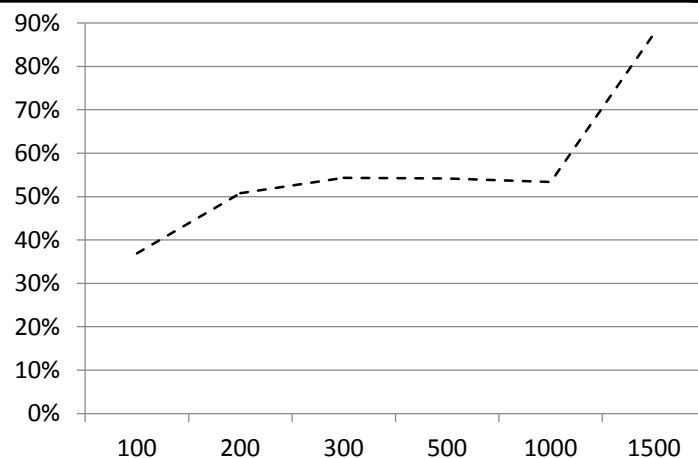
Number of firms operating in construction sector, differentiated by public procurement activity and donations made, total turnover higher than CZK 100 mil., period 2006-2012

	2006	2007	2008	2009	2010	2011	2012
# firms	460	563	606	622	635	598	511
# all firms	294	286	350	374	374	359	361
# PP suppliers							
# donating firms	65	22	47	33	63	19	33
# non-donating firms	229	264	303	341	311	340	328

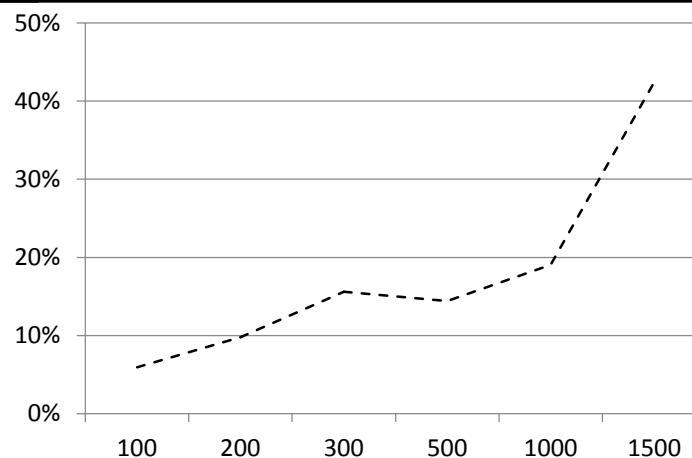
Source: politickefinance.cz, Magnus database, vsechnyzakazky.cz, author's calculations

Note: PP suppliers have supplied at least one public procurement contract in given year. Donating firms have donated at least once in given year. Only firms with turnover over CZK 100 mil. are counted.

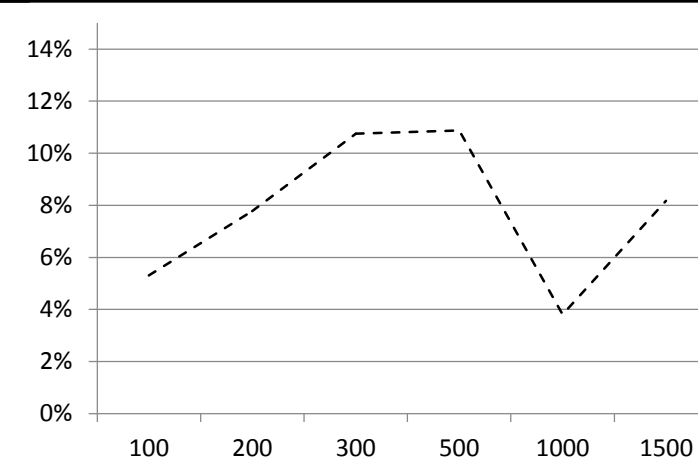
Share of PP suppliers (left), connected firms (middle) and donating firms (right) in construction sector, differentiated by turnover volume, period 2006-2012



----- PP suppliers



----- connected



----- donating

Donations: tenders count and volume

Average count of obtained tenders by 1 firm, differentiated by total turnover volume and donations, 2006 - 2012

		2006	2007	2008	2009	2010	2011	2012	2006-2012
Turnover CZK 100 - 1 000 mil.	# obtained tenders	3,38	4,00	4,84	6,75	4,98	4,91	6,35	4,85
	donating firms								
	# obtained tenders	3,42	3,42	4,11	4,44	4,49	3,68	4,28	4,03
	other firms								
	diff.	99%	117%	118%	152%	111%	133%	148%	120%
Turnover CZK 1 000 + mil.	# obtained tenders	19,17	-	30,25	20,33	27,50	21,00	49,33	27,43
	donating firms								
	# obtained tenders	10,44	13,84	14,91	16,43	19,03	23,46	31,68	18,51
	other firms								
	diff.	184%	-	203%	124%	145%	90%	156%	148%

Source: politickefinance.cz, Magnus database, vsechnzakazky.cz, author's calculations

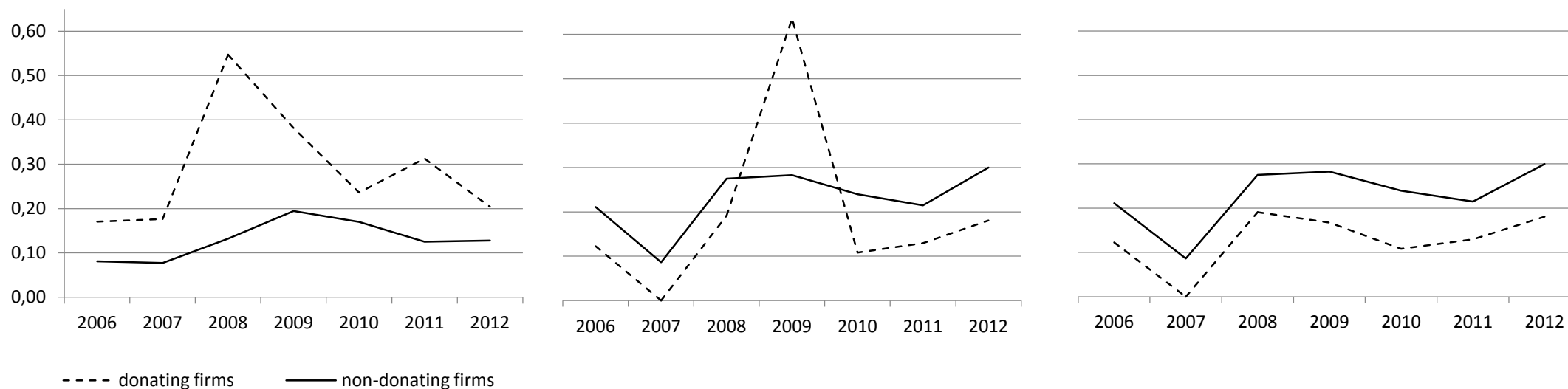
Average volume of obtained tenders by 1 firm, differentiated by total turnover volume and donations, 2006 - 2012 (in CZK Mil.)

		2006	2007	2008	2009	2010	2011	2012	2006-2012
	tenders volume, donating firms	72,95	89,58	252,25	147,47	94,84	135,90	79,51	123,67
	tenders volume, other firms	56,82	58,79	87,06	112,66	100,11	77,64	80,84	84,81
	diff.	128%	152%	290%	131%	95%	175%	98%	146%
	tenders volume, donating firms	398,50	-	679,83	6155,79	423,91	279,01	707,29	1317,82
tenders volume, other firms	1020,32	581,01	1571,64	1195,23	1283,92	983,47	1373,48	1151,93	
diff.	39%	-	43%	515%	33%	28%	51%	114%	

Source: politickefinance.cz, Magnus database, vsechnzakazky.cz, author's calculations

Donations: PP/TO share

Average share of public procurement in total turnover, donating firms vs. non-donating firms, 2006-2012,
turnover volume CZK 100 – 1 000 mil. (left diagram);
turnover volume CZK 1 000+ mil. (middle diagram);
turnover volume CZK 1 000+ mil. excluding Prague underground tender in 2009 (right diagram)



Connections: tenders count and volume

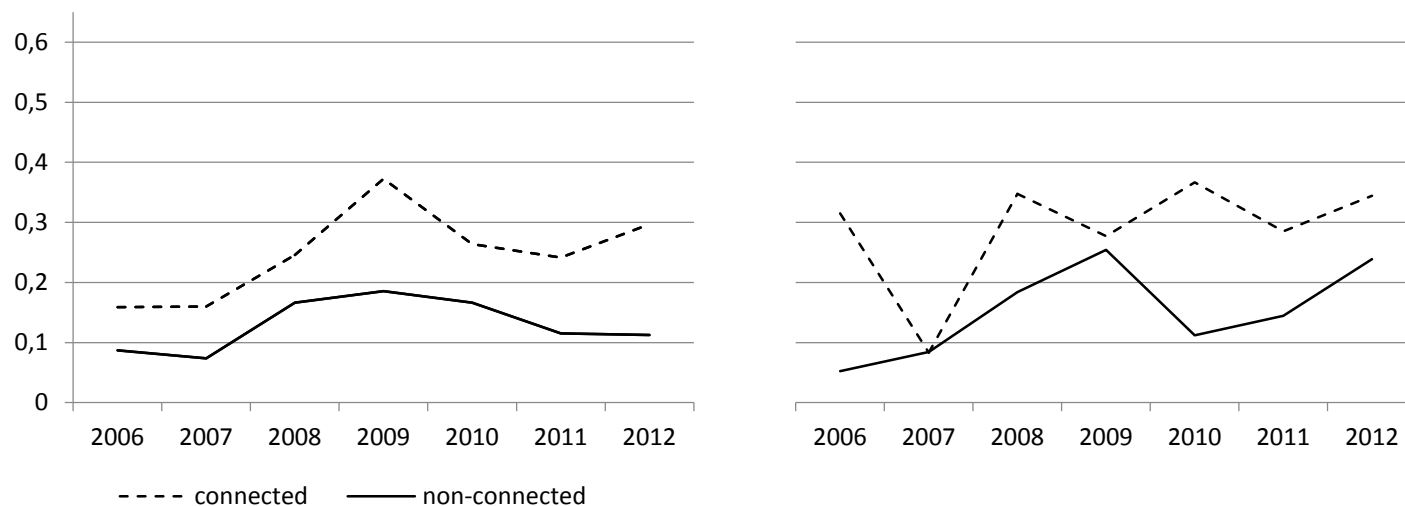
Summary statistics of the construction sector of public tenders, differentiated by connections dummy, 2006-2012, volume in CZK mil.

	Count of firms	Count of tenders	Average count of obtained tenders by 1 firm	Total volume of obtained tenders	Average volume of obtained tenders by 1 firm	Share PP/TO
All firms	505	12 257	24	455 354,5	901 692,1	18,8%
Connected firms	77	4 498	58	232 275,6	3 016 565,8	27,8%
Non-connected firms	428	7 759	18	223 079,0	521 212,5	14,1%

Source: non-public dataset by nasipolitici.cz, Magnus database, vsechnzakazky.cz, author's calculations

Connections: PP/TO share

Average share of public procurement in total turnover, connected firms vs. nonconnected firms, 2006-2012, turnover volume CZK 100 – 1 000 mil. (left diagram); turnover volume CZK 1 000+ mil. (right diagram)



Determinants of # bidders in PP

Wilcoxon Rank-Sum Tests for difference between medians of average # bidders. Null hypothesis: the two medians are equal. Tenders' winners in columns.

	donating firm	non- donating firm	connected firm	non- connected firm	donating connected firm	other firm
average # bidders	5,40	5,70	5,34	5,81	5,31	5,69
p-value	0,00		0,00		n/a	

Source: non-public dataset by nasipolitici.cz, politickefinance.cz, vsechnzakazky.cz, author's calculations

OLS, using observations 1-21721

Dependent variable: bidders_count

Heteroskedasticity-robust standard errors, variant HC1

	coefficient	std. error	t-ratio	p-value	
const	8.60930	0.108622	79.26	0.0000	***
druh2	-3.28813	0.114550	-28.70	6.96e-178	***
druh3	-2.97276	0.111155	-26.74	4.66e-155	***
druh4	-3.42929	0.117863	-29.10	1.30e-182	***
druh5	-7.04855	0.107463	-65.59	0.0000	***
Don_dummy	-0.223033	0.0712926	-3.128	0.0018	***
Con_dummy	-1.67171	0.265544	-6.295	3.12e-010	***

Mean dependent var 5.710603 S.D. dependent var 5.711966

Sum squared resid 586051.4 S.E. of regression 5.195148

R-squared 0.173002 Adjusted R-squared 0.172773

F(6, 21714) 2616.317 P-value(F) 0.000000

Log-likelihood -66607.50 Akaike criterion 133229.0

Schwarz criterion 133284.9 Hannan-Quinn 133247.2

Tender types: Open(default); Restricted; Simplified under-limit;
Negotiated with publication; Negotiated without publication

2) PP → firms output

- Problematic: PP/To share is too weak indicator of profitability or firm's value

2006-2012						
TO volume	n		ROE	ROI	EBT/TO	EBIT/TO
100-200	584	pp_1	0,008	0,067	0,032	0,045
	998	pp_0	0,112	0,065	0,040	0,054
		Wilcox. P-value	0,597653	0,356022	0,5089	0,487989
200-300	431	pp_1	0,154	0,074	0,038	0,054
	418	pp_0	0,088	0,066	0,031	0,052
		Wilcox. P-value	0,576335	0,092275	0,460573	0,675582
300-500	379	pp_1	0,075	0,037	0,050	0,051
	319	pp_0	0,099	0,065	0,038	0,053
		Wilcox. P-value	0,245722	0,543935	0,972795	0,914924
500-1000	274	pp_1	0,217	0,080	0,046	0,062
	232	pp_0	0,129	0,081	0,063	0,071
		Wilcox. P-value	0,445982	0,259731	0,611249	0,187498
1000-1500	56	pp_1	0,146	0,067	0,047	0,060
	49	pp_0	0,216	0,076	0,047	0,065
		Wilcox. P-value	0,537486	0,410987	0,127939	0,165322
1500+	225	pp_1	0,165	0,053	0,035	0,045
	32	pp_0	-0,262	0,010	-0,066	-0,066
		Wilcox. P-value	0,388898	0,277797	0,27332	0,647315

Hypotheses

- 1. Do donating / connected firms on average receive more financial resources from the public tendering process (in comparison to non-donating firms)?
- 2. Do firms donating political parties on average face lower competition in the public tendering process (in comparison to non-donating firms)?
- 3. Are companies depending on the finances from public procurement more profitable than industrial average? (Are public tenders profitable for the suppliers?)
- 4. Are donating / connected companies on average more profitable than non-donating companies? Do connections to politics add any value to company?

Literature

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