Online Appendix for the paper "Audit Risk and Rent Extraction: Evidence from a Randomized Evaluation in Brazil"

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June 14, 2013

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Table 9.1: Impact on the number of procurement processes, cumulative controls

Dependent variable: number of procurement processes; control group mean 14.4, std. 9.5

Treatment (0/1)	-4.400*	-4.385*	-6.914*	-5.090*	-5.479*	-2.700*	-2.740**	-2.187	-2.744	-3.590
	(2.563)	(2.423)	(3.610)	(2.686)	(2.953)	(1.402)	(1.327)	(1.537)	(1.862)	(2.192)
State intercepts	N	Y	N	N	N	N	Y	Y	Y	Y
Mayor's party affiliation	N	N	Y	N	N	N	N	Y	Y	Y
Municipality characteristics	N	N	N	Y	N	N	N	N	Y	Y
Mayor's characteristics	N	N	N	N	Y	N	N	N	N	Y
Observations	60	60	60	60	60	120	120	120	120	120
R-squared	0.048	0.626	0.277	0.145	0.228	0.018	0.290	0.420	0.491	0.563

Notes: OLS estimations. Sample consists of municipalities from the 32nd and 31st lotteries. Treatment indicates whether the municipality was in the high audit probability group during the year leading up to the 32nd lottery. Municipality characteristics: year 2007 population, income per capita, average years of schooling, urbanization, poverty headcount ratio, poverty gap, gini coefficient, radio station, all measured in 2000. Mayor's characteristics: first-term mayor indicator, education level indicators, male dummy and age. Robust standard errors are given in parentheses. *, **, and *** indicate significance at 10 percent, 5 percent and 1 percent levels respectively.

Table 10.1: Impact on the proportion of restricted procurement modalities, cumulative controls

Dependent variable: proportion of restricted procurement modalities; control group mean 0.72, std. 0.28

Treatment (0/1)	-0.083	-0.066	-0.158*	-0.048	-0.124	-0.122**	-0.119*	-0.134**	-0.157**	-0.159*
	(0.093)	(0.089)	(0.083)	(0.092)	(0.082)	(0.060)	(0.062)	(0.069)	(0.080)	(0.086)
State intercepts	N	Y	N	N	N	N	Y	Y	Y	Y
Mayor's party affiliation	N	N	Y	N	N	N	N	Y	Y	Y
Municipality characteristics	N	N	N	Y	N	N	N	N	Y	Y
Mayor's characteristics	N	N	N	N	Y	N	N	N	N	Y
Observations	60	60	60	60	60	120	120	120	120	120
R-squared	0.019	0.573	0.338	0.209	0.280	0.031	0.462	0.531	0.578	0.622

Notes: WLS estimations with weights equal to the number of procurement processes in the municipality. Restricted procurement modalities refer to direct purchases by the local administration, bids only by invitation and the modality where only pre-registered bidders can compete for the contract. Sample consists of municipalities from the 32nd and 31st lotteries. Treatment indicates whether the municipality was in the high audit probability group during the year leading up to the 32nd lottery. Municipality characteristics: year 2007 population, income per capita, average years of schooling, urbanization, poverty headcount ratio, poverty gap, gini coefficient, radio station, all measured in 2000. Mayor's characteristics: first-term mayor indicator, education level indicators, male dummy and age. Robust standard errors are given in parentheses. *, **, and *** indicate significance at 10 percent, 5 percent and 1 percent levels respectively.

Table 11.1: Impact on federal transfers per capita, cumulative controls

Dependent variable: per capita federal transfers in 2009; control group mean 884, std. 521

Treatment (0/1)	-119.8	-177.4	-126.0	-11.98	-190.1	-32.9	-92.2	-123.2	-92.5	-8.8
	(140.2)	(187.8)	(167.5)	(128.6)	(156.8)	(105.7)	(113.8)	(105.2)	(99.0)	(115.4)
State intercepts	N	Y	N	N	N	N	Y	Y	Y	Y
Mayor's party affiliation	N	N	Y	N	N	N	N	Y	Y	Y
Municipality characteristics	N	N	N	Y	N	N	N	N	Y	Y
Mayor's characteristics	N	N	N	N	Y	N	N	N	N	Y
Observations	57	57	57	57	57	115	115	115	115	115
R-squared	0.013	0.273	0.406	0.457	0.206	0.001	0.253	0.436	0.401	0.685

Notes: OLS estimations. Sample consists of municipalities from the 32nd and 31st lotteries. Treatment indicates whether the municipality was in the high audit probability group during the year leading up to the 32nd lottery. Municipality characteristics: year 2007 population, income per capita, average years of schooling, urbanization, poverty headcount ratio, poverty gap, gini coefficient, radio station, all measured in 2000. Mayor's characteristics: first-term mayor indicator, education level indicators, male dummy and age. Robust standard errors are given in parentheses. *, **, and *** indicate significance at 10 percent, 5 percent and 1 percent levels respectively.

Table 12.1: Impact on irregular procurement processes, cumulative controls

Dependent variable: proportion of irregular procurement processes; control group mean 0.63, std. 0.25

Treatment (0/1)	-0.164**	-0.146***	-0.163**	-0.165**	-0.168**	-0.172***	-0.159***	-0.150***	-0.080	-0.066
	(0.073)	(0.053)	(0.077)	(0.076)	(0.072)	(0.052)	(0.045)	(0.050)	(0.056)	(0.057)
State intercepts	N	Y	N	N	N	N	Y	Y	Y	Y
Mayor's party affiliation	N	N	Y	N	N	N	N	Y	Y	Y
Municipality characteristics	N	N	N	Y	N	N	N	N	Y	Y
Mayor's characteristics	N	N	N	N	Y	N	N	N	N	Y
Observations	60	60	60	60	60	120	120	120	120	120
R-squared	0.099	0.757	0.249	0.339	0.283	0.077	0.494	0.552	0.650	0.686

Notes: WLS estimations with weights equal to the number of procurement processes in the municipality. A procurement process is coded irregular if the audit result from Table 6 is anything other than regular or only a formal error. Sample consists of municipalities from the 32nd and 31st lotteries. Treatment indicates whether the municipality was in the high audit probability group during the year leading up to the 32nd lottery. Municipality characteristics: year 2007 population, income per capita, average years of schooling, urbanization, poverty headcount ratio, poverty gap, gini coefficient, radio station, all measured in 2000. Mayor's characteristics: first-term mayor indicator, education level indicators, male dummy and age. Robust standard errors are given in parentheses. *, **, and *** indicate significance at 10 percent, 5 percent and 1 percent levels respectively.

Table 13.1: Impact on mismanagement or corruption irregularities, cumulative controls

Dependent variable: proportion of procurement processes with evidence of mismanagement or corruption; control group mean 0.47, std. 0.24

Treatment (0/1)	-0.167**	-0.114*	-0.215***	-0.133*	-0.178***	-0.200***	-0.177***	-0.179***	-0.130**	-0.148**
	(0.071)	(0.065)	(0.073)	(0.072)	(0.066)	(0.051)	(0.049)	(0.053)	(0.059)	(0.061)
State intercepts	N	Y	N	N	N	N	Y	Y	Y	Y
Mayor's party affiliation	N	N	Y	N	N	N	N	Y	Y	Y
Municipality characteristics	N	N	N	Y	N	N	N	N	Y	Y
Mayor's characteristics	N	N	N	N	Y	N	N	N	N	Y
Observations	60	60	60	60	60	120	120	120	120	120
R-squared	0.106	0.637	0.320	0.333	0.271	0.105	0.505	0.594	0.658	0.695

Notes: WLS estimations with weights equal to the number of procurement processes in the municipality. Corruption corresponds to cases of simulated (fake) tender processes, cases of favouritism, or when auditors determine that there were unjustified or excessive payments for goods or services, as well as cases of fractionalized procurement amounts. Management irregularities correspond to instances where less than three firms were invited to submit bids or procurement modalities were too restricted, as well as other irregularities. See Table 6 for details. Sample consists of municipalities from the 32nd and 31st lotteries. Treatment indicates whether the municipality was in the high audit probability group during the year leading up to the 32nd lottery. Municipality characteristics: year 2007 population, income per capita, average years of schooling, urbanization, poverty headcount ratio, poverty gap, gini coefficient, radio station, all measured in 2000. Mayor's characteristics: first-term mayor indicator, education level indicators, male dummy and age. Robust standard errors are given in parentheses. *, **, and *** indicate significance at 10 percent, 5 percent and 1 percent levels respectively.