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The impact of political connections on public procurement: Evidence from Portugal

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Abstract

This paper uses the municipal elections of 2013 to infer the impact political connections have on public procurement. Obtaining government related contracts may be a possible justification for the increase in value that firms face when connected. Data on public contracts celebrated between 2009 and 2017 in all 308 Portuguese municipalities was combined with managers, politicians and companies' financial information. Through a Difference-in-Differences strategy, a positive and significant impact was found: not only there is an increase in number, but also a rise in the volume of contracts celebrated by companies connected. This impact is extensible to firms connected with winning parties and the shift in value is amplified in procedures where companies can directly choose the contractor entity. Additionally, effects are driven by companies placed in small councils and by those that contract above the sample median.

1 Introduction

According to OECD reports, the total volume of public procurement in 2013 accounted for 12% of GDP and 29% of general government expenditure in the OECD countries (amounting to EUR 4.2 trillion).[1] In Portugal, contracting values reported to *base: Contratos Públicos Online* have been increasing over the years: while in 2015 they corresponded to 2.57% of GDP, in 2017 they represented 3.42%.[2] From all contracts celebrated, there is a persistent tendency with respect to the preferential procedure given that the direct award has consecutively been the most reported method.

Recent interest on the impact that political connections have on public procurement has been emerging due to the new availability of data. We contribute to this literature by using a rich dataset that includes information on public contracts, managers' data, political and electoral outcomes and firms' financial variables.

Portugal is an interesting case study. In the Eurobarometer (OECD (2016)), it is stated that Portuguese firms lack trust in the national public procurement because they perceive hitches with direct awards and non-competitive procedures.[3] In addition, it is confirmed that Portuguese managers strongly agree that close linkages between politicians and businessmen lead to corruption. Furthermore, 65% of them consider that, in the business area, the easiest path for success is through political connections.[4] Recently, a flow of local episodes such as the purchase of centenarian olive trees in the amount of 60 000€ to a company run by a mayor's family and the well-known case of "Rota Final" contributed to a further rise of awareness concerning the existing lack of transparency.[5]

Public procurement is one of the government activities most vulnerable to corruption. Corruption risks are associated with distortions in the allocation of resources. These inefficiencies may emerge both at a national or at a subnational level. OECD publications on this matter (OECD (2016)) induce that closer community contacts between public officials and business representatives may provide greater opportunities to pursue these types of misbehaviour.

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[1]Information gathered from OECD (2017).

[2]http://www.base.gov.pt/Base/pt/Homepage

[3]Direct awards are awarded under extremely urgent situations but they used to be broadly interpreted in the sense that they contributed to the celebration of excessive contracts.

[4]This can be read on the following article "Empresários portugueses são os que mais se queixam de "ligações políticas" " from the newspaper ECO (2019).

[5]Rota Final is a Portuguese episode of possible corruption between municipalities and a public transportation company, which is currently under investigation. The case is related with the existence of a fraudulent and vicious crime in the public procurement, aiming to favour individual and legal persons.

The present paper uses variation arising from the municipal elections of 2013 to identify effects associated with becoming connected, i.e., companies that have a manager who has run to the elections. Several outcome variables are analysed namely, the number of government related contracts, the ratio between the volume of government contracts and the company's assets in the previous period and the probability of obtaining a contract. We also present results from an alternative specification with a new treatment - being connected to the winning party - and an extra dependent variable - the ratio between the volume of government related direct awards and the company's lagged assets. The time period considered ranges between 2009 and 2017 and the study is made at a firm level.

To conduct the mentioned analyses, a Difference-in-Differences estimation was implemented. Results point to a persistent positive effect for those receiving treatment: connected firms celebrate more 0.045 contracts and face an increase on their volume over assets' ratio of more 0.001 percentage points, when compared to the control group. Analyses of extensive and intensive margins also support these findings. This contributes to the literature because no similar studies on this topic have yet been done for the Portuguese Economy.

The remainder of the paper is organised as follows: Section 2 includes the literature review. A brief explanation of the Portuguese public procurement and of the electoral process can be found in section 3. Data and methodology are presented in Section 4. Results and heterogeneous effects are discussed in Section 5. Extensive and intensive margins are presented in Section 6. Section 7 portrays an analysis focused on direct awards. An extension of the DiD methodology can be found in Section 8 and lastly, a summary of the results, some limitations and potential further research are addressed on section 9.

2   Literature Review

There is, by now, a quite extensive literature showing that political connections have an impact on firm value, using data for different countries, including the USA (Acemoglu et al. (2016)), Tunisia (Rijkers et al. (2014)), Italy (Akcigit et al. (2018)), China (Fan et al. (2007)), Malaysia (Johnson & Mitton (2003)), Indonesia (Fisman (2001)), and Pakistan (Khwaja & Mian (2005)).

Ferraz et al. (2016) explored data for public contracts in Brazil to show that there are benefits arising from winning government procurement contracts. These authors found evidence that the public procurement was one of the channels that could justify gaps between firms' dynamics.

Their results show that winning a government contract leads to an immediate and sizeable increase in firm's value, which is an explanation to the persistent growth of connected firms.

Departing from the same idea, papers showing the importance of political connections include studies conducted by Dicko (2016) for Canadian firms connected with the Parliament between 2010 and 2014 and by Brogaard et al. (2015) for municipal connections in the U.S. between 2000 and 2012. Both concluded that connections enhance competitive advantages, which increases the likelihood of receiving additional contracts (mostly more attractive ones).

There is also some evidence that the quality of political connections matters, namely whether or not they relate to the winning party. For instance, Goldman et al. (2013) concluded that, these connections increased the likelihood of experiencing a shift in the value of Government procurement contracts. Do et al. (2015) presented further support to this idea by showing that connections bounded via a winning party eased the access to the public procurement, leading to more and significantly larger contracts.

The last noteworthy fact we would like to emphasise is that, very often, the increase in the likelihood of celebrating, not only more contracts, but also more valuable ones, is associated with the usage of less competitive methods. Çeviker Gürakar & Ildiri (2016) studied the legal amendments (implemented in Turkey in 2008) that allowed companies to discriminate with respect to the type of celebrated contract and concluded that the number of restricted procedure contracts, in which procuring entities could directly invite firms, increased significantly after this change, mainly for companies with political connections. Brugués et al. (2018) also inferred that connected firms displayed higher probability of receiving public contracts, particularly those where bureaucrats (government officials) had discretion in choosing the winner of the public contest.

3   Elections and public procurement in Portugal

3.1   Elections

At the municipal level, there are four main institutions: the Town Hall (*Câmara Municipal*) and the Parish Council (*Junta de Freguesia*), both consecrated with executive power and the Municipal and the Parish Assembly (*Assembleia Municipal* and *Assembleia de Freguesia*), that are deliberative bodies. The first two institutions have the duty of presenting proposals, while

the latter are responsible of approving/rejecting them. In case of acceptance, the executive bodies are then in charge of implementing the directives. For the mainland, municipalities are the second level of decentralised government in Portugal. Each municipality is further divided into parishes (*freguesias*), which are the lowest level of administration.

The electoral process is done via secret suffrage at a local level, meaning that, the territory of the respective local authority shall represent a single constituency. Mandates last for four years and elections take place between the 22nd of September and the 14th of October of the ruling term's last year. The Town Hall is elected proportionally, since votes are converted into seats through the *D'Hondt method*. The head of the most voted electoral list is appointed as mayor and the Council further includes between 4 and 16 alderman, depending on the municipal population. Before 2005, there were no term limits for the executive bodies. However, the 2005's reform set a maximum of three consecutive terms as an attempt to erode inertia and promote the renewal of those in ruling. The year of 2013 was the first one in which this new law was binding.

3.2 Public procurement

In Portugal, public contracts are celebrated under the Public Procurement Code (PPC, 2008). As stated on its 2nd article, during the contracts' implementation, the general principles deriving from the Portuguese Constitution, the European Union's treaties and the Code of Administrative Procedure must be under compliance.

There are seven different types of contracting procedures.[6] These can be categorised into two subgroups: noncompetitive procedures, in which the contracting authority is entitled to choose and directly invite an entity (or several) to submit a tender; and competitive procedures, wherein the contracting entity announces its intentions on both *Diário da República* and on the Official Journal of the European Union and possible contractors apply to the proposal by submitting their tenders. The main difference is that, for the latter, it is a qualified jury that decides the contractor entity.

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[6]For detailed information check base: Contratos Públicos Online (2017).

Direct awards are the most common type of contracts celebrated in Portugal. They belong to the former category and they take place whenever the underlying price does not surpass a settled threshold- below 20 000€ for goods and services, for public works below 30 000€ and for other contracts below 50 000€ - or under unconventional circumstances foreseen in the PPC (e.g. extremely urgent situations).[7]

4 Data and methodology

4.1 Data

To conduct the present study, we used a rich dataset that combines information on public contracts, managers, politicians and companies' financial indicators. For Local Government representatives and electoral outcomes, information was collected from both the National Elections' Commission (CNE – *Comissão Nacional de Eleições*) and from the Ministry of Internal Affairs (MAI – *Ministério da Administração Interna*). Concerning managers, detailed private companies' information was taken from ORBIS. For public procurement and contracts, it was withdrawn from *base: Contratos Públicos Online*.[8] Lastly, for the control variables, financial indicators were collected from Amadeus.[9] This allowed to obtain variables like the company's fiscal identification number, total assets, managers and candidates' names, percentage of votes in the electoral process, politicians' roles, council codes, among others.

The time period analysed ranges between 2009 and 2017 and the study focuses on public contracts celebrated by private companies in all 308 Portuguese municipalities.[10] The final sample includes 328 122 corporations, from which 21 718 had a political connection. More precisely, in the elections that took place in 2013, 3 181 of them became connected for the first time and 1 351 narrowed relations with the winner party.

Table 1 portrays detailed information about firms' observations on an yearly basis.

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[7]Direct awards must comply either with the value criteria or with the material criteria.

[8]Not all contracts have to be electronically reported, but the figure is quite high (62% of total public procurement volume in 2016).

[9]Amadeus is a database of comparable financial information for public and private companies across Europe.

[10]Azores and Madeira are included.

Year	Nr. companies	Nr. connected	Nr. contracts	Nr. gov. contracts
2009	269338	18580	57358	28553
2010	266834	18345	46923	21407
2011	262448	17841	42131	19797
2012	250452	16983	36587	15843
2013	232921	15943	43837	18169
2014	218555	15080	48060	15324
2015	204737	14200	50598	19343
2016	192504	13437	48798	20738
2017	176763	12285	53384	25051

Table 1: Yearly descriptive statistics

To construct the dataset, the person's full name and council code were used to match managers who were also politicians, hence, creating the desired politically connected variable indicator. To be regarded as connected, the company must embody, at least, one manager that has run for the elections. For instance, if in company A (that was not connected in 2009) a manager ran to the elections in 2013, from 2014 onwards, the company was considered as politically connected. Even though elections took place in 2013, we set the treatment's year to 2014 since they occurred in October thus, almost at the end of the year.[11] Managers do not mandatorily have to be elected for the company to become connected, for example, if a company's manager was the head of an opponent list that has run to the 2013's elections but has not been elected, the company would still be included in the treatment group.[12] In the dataset, each firm is represented by a single manager. To do so, managers were ordered by increasing importance of their political role and we only kept the manager who held the highest political position.[13] In companies with no political relations, a random person was chosen.[14] This allowed to distinguish between companies that were indeed connected and those that had never experienced such type of linkage.

We used the following outcome variables: Number of government related contracts, ratio between these contracts' volume and the company's total assets in the previous period and the probability of obtaining a contract. The ratio was used to take into account firms' dimensions. Given the importance of direct awards and its easy manipulation, an extra analysis was performed and so, a new outcome was considered: the ratio between the volume of government

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[11]More precisely, elections took place on the 29th of September.

[12]Note that, links with heads of opponent lists are the only type of connection in which a person does not need to be elected for the company to be treated.

[13]The most important role is being President of the Town Hall and the last role in the list is being elected for the Parish Assembly.

[14]The same mechanism was applied in cases where there were more than one political connection at the same stage. If they all had the same political role, then one was randomly selected.

related direct awards and the company's lagged assets.[15] All variables were constructed at a firm level. Contracts were considered as "government related" every time they were made by Local Government contracting entities. Contracting entities received the previous status whenever we were dealing with either Municipal Associations (*Associações de Municípios*, whose general purpose is to promote, defend, dignify and represent the Local Government), Municipal companies (*Empresas Municipais* - companies owned by municipalities, associations of municipalities or administrative regions that are allowed to have equity), Parishes (*Freguesias*) or Municipalities (*Municípios*).

Table 2 provides descriptive statistics for all variables used in the analysis, between 2009 and 2017.

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent Variables					
Nr. contracts	1,963,033	0.0866	0.9248	0	197
Volume/Assets$_{t-1}$	1,651,818	0.0019	0.0130	0	0.1523
Vol. DA /Assets$_{t-1}$	248,226	0.0363	0.1413	0	1.2818
Volume	1,963,033	4837.192	329956.1	0	3.54e+08
Vol. DA	286,108	16470.5	158499.2	0	4.79e+07
Treatments					
Connected	1,907,690	0.0104	0.1013	0	1
Winner	1,907,690	0.0047	0.0681	0	1
Controls					
$Log(Assets)$	1,960,622	11.8859	1.6686	0	21.0789
P&L	1,963,033	0.0046416	0.0568126	-0.34372	0.515195
Nr. employees	1,728,470	0.0720717	0.3405211	0	85.65
Dummies					
Large council	1,963,033	.03625	0.4807	0	1
Above median	1,963,398	0.9349	0.2467	0	1
NUTS lll	1,963,033	17.4340	6.6414	1	25
Industry	1,963,033	45.2698	17.2757	11	81
Years	1,963,033	2012.621	2.5392	2009	2017

Notes: Vol. DA stands for volume of direct awards and P&L for profits and losses of the period. Variables' units: Volume/Assets$_{t-1}$ and Vol. DA /Assets$_{t-1}$ are in percentage points; Volume, Vol. DA and assets are in euros; P&L are in millions of euros; Contracts are in units; Employees are in hundred of employees; Connected, Winner, Large council, Above median, NUTS lll, Industry and Years are dummy variables.

Table 2: Descriptive statistics

4.2 Methodology

The identification strategy chosen was a Difference-in-Differences estimation (DiD). DiD is robust to time-invariant individual heterogeneity and to group-invariant time effects. It exploits naturally occurring exogenous variation to mimic a randomised experiment.

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[15]This incorporates a new treatment which is connections established with the winning party.

Though the present analysis is made focusing on the main treatment - being politically connected -, there are two different treatments in this study. Regarding the main one, which is being connected, a company belongs to the treatment group if one of its managers runs to the 2013's municipal elections, given that there were no connections in the previous electoral term.[16] On the other hand, the secondary treatment focuses on companies that gained a linkage with someone elected from the most voted party, once more, given that the company was not connected in 2009. Concerning the control group, only firms that had never experienced any type of connection were considered. For the DiD estimation, outcome variables used were the number of government related contracts, the ratio between the volume of government related contracts and the company's total assets in the previous period and, for the additional analysis, the ratio between government related direct awards' volume and the company's lagged assets.

We estimated the regression represented in Equation (1), where Di stands for the treatment variable that signals companies belonging the treatment group, y_{it} is the outcome variable, z_t represents the post treatment period– years after 2013 –, X_{it} depicts the covariates used as controls and lastly, α_i, ρ_s and λ_t represent local (NUTS lll), industry and year dummies, respectively.

$$y_{it} = \beta_0 + \beta_1 D_i + \gamma\, D_i \times z_t + \alpha_i + \rho_s + \lambda_t + X_{it}\beta + \epsilon_{it} \tag{1}$$

Still based on Equation (1), we performed an extensive and an intensive analyses. For the former, a Linear Probability model was constructed. The outcome variable used was the probability of obtaining a contract (y_{it} took value 1 for firms that had contracts and zero for the others).

4.3 Validity of the DiD methodology

To make sure that estimates from the DiD were valid, we started by testing whether the parallel trends assumption was holding. This requirement implies that the outcome in both groups would follow the same time trend when in absence of treatment.

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[16]This way we are avoiding dual terms that would contaminate the real effect. Most companies that were treated have connections with managers that has run and actually got elected.

From Figure 1, we can see that the outcome variables respect the parallel trends assumption.
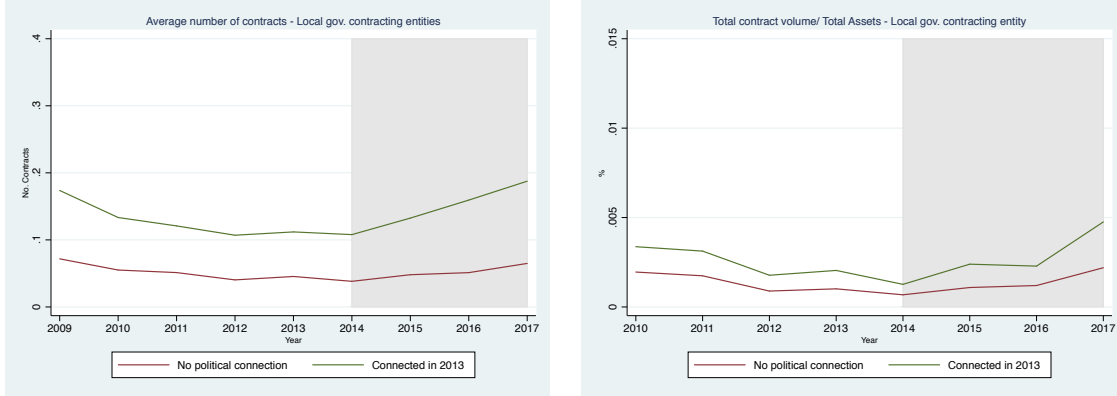
Notes: Graphs for both outcome variables. On the left-hand side we have the number of contracts and on the right-hand the ratio between contracts' volume and lagged assets. The second outcome does not have information for 2009 due to the lag included in the ratio.

Figure 1: Common trends

In regards to the balancedness of the covariates between treatment and comparison firms, Table 3 shows that connected firms have on average more assets, more profits and higher number of employees. These variables were included as controls in the analysis as a way to ensure that, after controlling for differences in observables, groups were comparable.

	Nr. contracts			Volume/Assets$_{t-1}$		
Variable(s)	Mean Control	Mean Treated	Pr(T>t)	Mean Control	Mean Treated	Pr(T>t)
$Log(Assets)$	11.790	12.229	0.0000***	11.863	12.302	0.0000***
P&L	0.001	0.005	0.0000***	0.001	0.005	0.0000***
Nr. employees	0.068	0.108	0.0000***	0.069	0.110	0.0000***

Table 3: Differeces in means.

Finally, we performed an event study estimation to further test the assumption. An identification strategy similar to the one used by Brugués et al. (2018) was followed and the event study was designed in the following form:

$$y_{it} = \omega_0 + \delta_1 D_i + \sum_{i=-5}^{3} \beta_j\, D_i \times z_t + \beta X'_{it} + \alpha_i + \rho_s + \lambda_t + \epsilon_{it} \qquad (2)$$

Where j$= -5, .., 3$ and 0 equals the elections' year.[17] The year before the elections ($j = -1$) was omitted as a way of providing coefficients that estimate the desired impact with respect to that year.

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[17]The elections' year is 2014 due to the adjustment made. When we use the ratio as outcome variable, the first year analysed is 2010 given that we consider lagged assets.

We are interested in the coefficients of the interactions between the treatment and each of the analysed years. According to Figure 2, prior to 2014, which is the treatment's year, it is never possible to reject the null of having coefficients equal to zero thus, they are not statistically significant. The respective table can be found in the appendix (Table 13). Once more, it is possible to conclude that common trends exist.

The main caveat we can identify is the presence of endogeneity issues. For instance, we may experience reverse causality due to well-performing firms which may help their managers to win elections (such thing would make assignment to treatment endogenous). More generally, a skill-set which makes a manager a good one can help him winning elections. These skills may also fuel an increase in the number of government related contracts obtained. However, such improvement would not be driven by treatment.
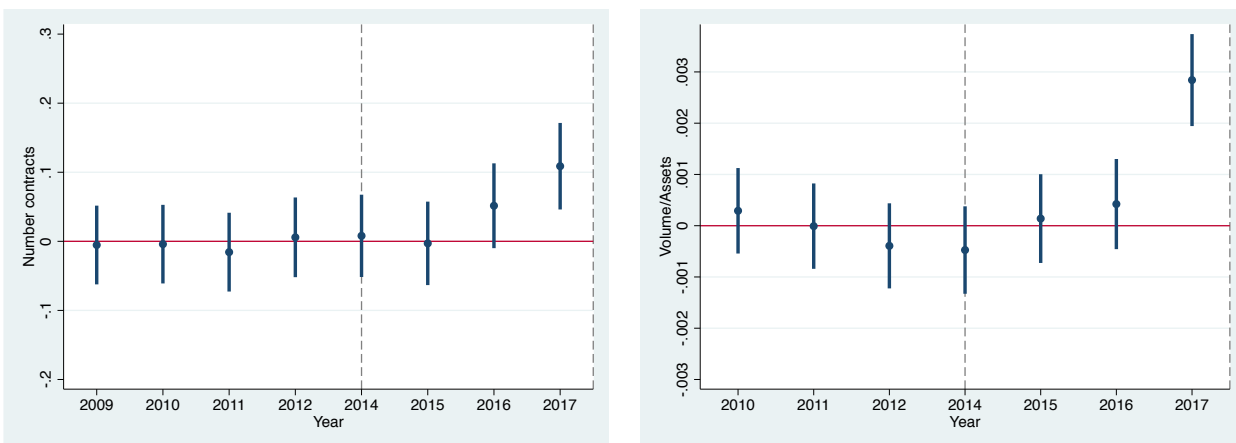
Notes: Graphs of both outcome variables. The x-axis reports years analysed. On the left-hand side, we have the number of contracts and on the right-hand the ratio between contracts' volume and lagged assets. The second outcome does not have information for 2009 due to the lag included in the ratio. Each bar corresponds to the 95% confidence interval of each of the interactions' coefficients. The parallel trend assumption holds if, in the pre-treatment period, all bars cross the zero line.

Figure 2: Event studies

5   Results and heterogeneous effects

5.1   Results

Based on Equation (1), Tables 4 and 5 portray the results of Difference-in-Differences regressions for the main treatment of becoming politically connected. Column (1) reports a pooled OLS regression, column (2) adds year dummies to the previous specification, column (3) consists in a panel regression with both financial controls, year dummies and fixed effects at the firm level,

column (4) is again a pooled OLS including both year and local dummies defined according to NUTS lll, column (5), besides year and NUTS lll dummies, also incorporates financial controls, column (6) includes both year and industry dummies, lastly, column (7) is the most complete one since, besides controls, it embodies the remaining dummies. All standard errors are robust to heteroskedasticity.

We have decided to use, mainly, pooled data because the panel structure was unbalanced and so, given that some firms only appeared once, there was not much within variation to be exploited. Financial controls, local dummies and industry dummies were used as alternative to the firm level fixed effects specification. Nonetheless, a regression with fixed effects, in (3), was also included to show that our findings are robust. Overall, results illustrate a positive and significant impact of the treatment on the outcome variables.

Table 4 takes as dependent variable the number of contracts celebrated by local government contracting entities. Based on column (7), we estimated that a connected firm obtains on average more 0.045 local government related contracts.

	Number of Contracts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post 2013	0.020***						
	(14.46)						
Connected	0.054***	0.054***		0.048***	0.026***	0.047***	0.017*
	(6.63)	(6.66)		(5.88)	(2.88)	(5.84)	(1.94)
Connected*Post_2013	0.043**	0.043**	0.046***	0.043**	0.045**	0.043**	0.045**
	(2.51)	(2.49)	(4.47)	(2.50)	(2.38)	(2.54)	(2.41)
$log(Assets)$			0.026***		0.049***		0.052***
			(23.87)		(61.73)		(60.89)
P&L			0.236***		0.589***		0.609***
			(19.08)		(19.08)		(19.64)
Nr. employees			0.098***		0.172***		0.171***
			(27.05)		(11.75)		(11.55)
Year dummies	No	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	No	Yes	No	Yes	No	Yes
Geographical dummies	No	No	No	Yes	Yes	No	Yes
Industry dummies	No	No	No	No	No	Yes	Yes
Fixed effects	No	No	Yes	No	No	No	No
Observations	1907690	1907690	1677978	1907690	1677978	1907690	1677978
Adjusted R-squared	0.000	0.001	-0.200	0.001	0.017	0.007	0.025

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Post 2013 is a dummy variable equal to 1 from 2014 onwards. Nr. stands for number and P&L for profits and losses of the period. Contracts are in units. Assets are in euros. P&L are in millions of euros. Nr. employees are in hundred of employees. The number of observations varies due to the inclusion of controls.

Table 4: Baseline results for becoming politically connected. Outcome variable: Number of government related contracts.

From Table 5 we can infer that the ratio of contracts' volume over the company's lagged total assets is 0.001 percentage points higher for connected firms, when compared with those from the control group. Given that the median value of assets over the sample is $139\,130.5€$, treated firms will face an increase in contracts' volume of $139.130€$ ($139\,130.5 * 0.001$).

	Volume/Assets$_{t-1}$						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post 2013	0.000***						
	(16.63)						
Connected	0.001***	0.001***		0.001***	0.001***	0.001***	0.001***
	(7.96)	(7.99)		(6.95)	(6.65)	(7.12)	(5.36)
Connected*Post_2013	0.001**	0.001**	0.001***	0.001**	0.001**	0.001**	0.001**
	(2.47)	(2.44)	(4.45)	(2.45)	(2.47)	(2.51)	(2.54)
P&L			0.003***		0.005***		0.006***
			(14.77)		(23.49)		(24.59)
Nr. employees			0.001***		0.001***		0.001***
			(13.81)		(10.89)		(10.53)
Year dummies	No	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	No	Yes	No	Yes	No	Yes
Geographical dummies	No	No	No	Yes	Yes	No	Yes
Industry dummies	No	No	No	No	No	Yes	Yes
Fixed effects	No	No	Yes	No	No	No	No
Observations	1604797	1604797	1417176	1604797	1417176	1604797	1417176
Adjusted R-squared	0.000	0.003	-0.212	0.005	0.007	0.019	0.026

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Post 2013 is a dummy variable equal to 1 from 2014 onwards. $Log(Assets)$ not included because assets are the denominator of the ratio. Nr stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. P&L are in millions of euros. Nr. employees are in hundred of employees.The number of observations varies due to either the inclusion of controls or the use of lags.

Table 5: Baseline results for becoming politically connected. Outcome variable: Government related contracts' volume over lagged total assets.

At a first glance, we can state that results are quite robust since significances are not affected by adding additional controls or dummies to the regressions. However, to further infer the robustness of the analysis and due to relevant differences in the governance of the autonomous regions of Azores and Madeira, we also examined only the Portuguese mainland. From Table 6, by excluding the islands, we can state that results are still robust, coefficients display the same sing and the associated magnitudes go quite in line with those from before.

	Nr. contracts		Volume/Assets$_{t-1}$	
	(1)	(2)	(1)	(2)
Post 2013	0.020***		0.000***	
	(14.51)		(16.14)	
Connected	0.053***	0.016*	0.001***	0.001***
	(6.51)	(1.77)	(7.67)	(5.25)
Connected*Post_2013	0.045**	0.047**	0.001**	0.001**
	(2.54)	(2.43)	(2.34)	(2.34)
$Log(Assets)$		0.052***		
		(60.50)		
P&L		0.627***		0.006***
		(19.34)		(24.21)
Nr. employees		0.167***		0.001***
		(11.42)		(10.38)
Year dummies	No	Yes	No	Yes
Controls	No	Yes	No	Yes
Geographical dummies	No	Yes	No	Yes
Industry dummies	No	Yes	No	Yes
Fixed effects	No	No	No	No
Observations	1839148	1621670	1547707	1369786
Adjusted R-squared	0.000	0.025	0.000	0.025

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Nr. stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. employees are in hundred of employees. Post 2013 takes value 1 from 2014 onwards. The number of observations varies due to either the inclusion of controls or the use of lags.

Table 6: Robustness analysis: Only firms in the mainland.

5.2 Heterogeneous effects

In this subsection, we cover the case of large versus small councils and look at companies that obtained more than the median number of contracts against those that got less.

The first heterogeneous effect focuses on large *vs* small councils. A council was considered large if it had more than 100 000 inhabitants. It has been shown by the OECD that closer communities present fewer obstacles to corruption since they enable warmer contacts between public officials and business representatives. In the regressions presented in Table 7, the sample was divided into two subsamples according to the council's size. For companies situated in large councils, estimates are not statistically significant. On the other hand, for small councils, effects are in line with those found in section 4.

	Large council		Small council	
	Nr. contracts	Volume/Assets$_{t-1}$	Nr. contracts	Volume/Assets$_{t-1}$
	(1)	(2)	(1)	(2)
Connected	0.021	0.001	0.025**	0.001***
	(0.61)	(1.55)	(2.51)	(5.09)
Connected*Post_2013	0.143	0.000	0.034**	0.001**
	(1.58)	(0.54)	(2.21)	(2.29)
$Log(Assets)$	0.045***		0.047***	
	(39.03)		(76.41)	
P&L	0.523***	0.005***	0.608***	0.005***
	(11.25)	(13.75)	(36.40)	(15.18)
Nr. employees	0.129***	0.001***	0.315***	0.003***
	(8.70)	(7.30)	(70.10)	(8.39)
Year dummies	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Geographical dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Fixed effects	No	No	No	No
Observations	605708	510139	1072270	907037
Adjusted R-squared	0.020	0.023	0.018	0.029

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). $Log(Assets)$ not included for the second outcome, (2), because assets are the denominator of the ratio. Nr. stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. of employees are in hundred of employees. The number of observations varies due the inclusion lags in the ratio analysed.

Table 7: Heterogeneous effect: Large vs small council

On Table 8, companies are split according to whether they stood above or below the median number of contracts celebrated by firms in the sample. The defined threshold was of 2 contracts. Results suggest stronger effects for connected companies that issued more contracts, when compared with those from the baseline. Moreover, for the remaining group, effects lose significances.

These analyses show that our results are driven by small councils and companies that contracted above the median, as the effects for large councils and firms below the median lose their significances.

	Below median		Above Median	
	Nr. contracts	Volume/Assets$_{t-1}$	Nr. contracts	Volume/Assets$_{t-1}$
	(1)	(2)	(1)	(2)
Connected	0.015	0.001	0.017*	0.001***
	(1.39)	(1.12)	(1.76)	(5.12)
Connected*Post_2013	0.002	0.002	0.052**	0.001**
	(0.10)	(1.23)	(2.48)	(2.25)
$Log(Assets)$	0.000		0.056***	
	(0.62)		(61.80)	
P&L	-0.036***	-0.004***	0.680***	0.006***
	(-2.60)	(-7.35)	(20.09)	(26.53)
Nr. employees	0.002	-0.002***	0.176***	0.001***
	(0.49)	(-5.94)	(11.30)	(10.36)
Year dummies	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Geographical dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Fixed effects	No	No	No	No
Observations	114739	99282	1563239	1317894
Adjusted R-squared	0.020	0.020	0.026	0.027

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). $Log(Assets)$ not included for the second outcome, (2), because assets are the denominator of the ratio. Nr. stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. employees are in hundred of employees.The number of observations varies due to the inclusion of lags in the ratio analysed.

Table 8: Heterogeneous effect: Above vs below the sample median number of contracts

6 Extensive and intensive margins

To complement the previous results, we also analysed extensive and intensive margins. While the former focuses on the probability of obtaining a contract (as opposed to number of contracts), the latter analyses the number of contracts conditional on having at least one contract.

For the extensive margin, a linear probability model was estimated based on Equation (1). The dependent variable considered was the probability of obtaining a contract and it took value 1 for firms that had contracts. We included both a simple regression and one with controls and all available dummies. Coefficients obtained in Table 9 show that being connected increases the probability of obtaining a contract by 0.7 percentage points.

In the intensive margin, we restricted the sample only to companies that had, at least, one contract during the period under analysis. Table 10 summarises coefficients obtained. As we can see, effects previously found seem to be amplified when both the treatment and the control group consist only in firms that are used to celebrate contracts.

	Prob. of having contracts	
	(1)	(2)
Post 2013	0.006***	
	(22.48)	
Connected	0.023***	0.013***
	(11.32)	(5.99)
Connected*Post_2013	0.007**	0.007*
	(1.99)	(1.91)
$Log(Assets)$		0.014***
		(109.68)
P&L		0.078***
		(21.35)
Nr. employees		0.029***
		(13.80)
Year dummies	No	Yes
Controls	No	Yes
Geographical dummies	No	Yes
Industry dummies	No	Yes
Fixed effects	No	No
Observations	1907690	1677978
Adjusted R-squared	0.001	0.042

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Post 2013 is a dummy variable equal to 1 from 2014 onwards. Nr stands for number and P&L for profits and losses of the period. Contracts are in units. Assets are in euros. P&L are in millions of euros. Nr. employees are in hundred of employees.The number of observations varies due to inclusion of controls.

Table 9: Extensive margin: Probability of obtaining a contract.

	Nr. contracts		Volume/Assets$_{t-1}$	
	(1)	(2)	(1)	(2)
Post 2013	0.051***		0.001***	
	(5.67)		(7.92)	
Connected	0.113***	-0.004	0.003***	0.001*
	(2.78)	(-0.09)	(4.24)	(1.84)
Connected*Post_2013	0.174**	0.173**	0.003**	0.003**
	(2.20)	(2.24)	(2.12)	(2.24)
$Log(Assets)$		0.246***		
		(55.72)		
P&L		0.276***		0.004***
		(11.85)		(6.05)
Nr. employees		0.106***		0.000***
		(7.44)		(3.76)
Year dummies	No	Yes	No	Yes
Controls	No	Yes	No	Yes
Geographical dummies	No	Yes	No	Yes
Industry dummies	No	Yes	No	Yes
Fixed effects	No	No	No	No
Observations	272838	258358	237362	225196
Adjusted R-squared	0.000	0.055	0.001	0.065

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Nr. stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. employees are in hundred of employees. Post 2013 takes value 1 from 2014 onwards. The number of observations varies due to either the inclusion of controls or the use of lags.

Table 10: Intensive margin: Only firms that have contracts.

7   Direct awards

We now concentrate on direct awards which are the contracts that allow for greater possibility of manipulation on behalf of politicians. Here, treatment was assigned to companies that became connected to the winning party. Tests performed to infer the validity of the common trends assumption can be found in the appendix (Figures 3 and 4 and Table 14) . Table 11 comprises two new regressions that use as outcome the ratio between the volume of government related direct awards and the company's assets in the previous period. All other dependent variables included in Section 5 were also analysed.

	Connected to the winning party					
	Nr. contracts		Volume/Assets$_{t-1}$		Volume DA/Assets$_{t-1}$	
	(1)	(2)	(1)	(2)	(1)	(2)
Post 2013	0.020***		0.000***		-0.000	
	(14.46)		(16.63)		(-0.32)	
Winner	0.037***	0.004	0.001***	0.001***	0.004	0.002
	(3.07)	(0.29)	(4.78)	(3.18)	(0.70)	(0.29)
Winner*Post_2013	0.034*	0.034	0.001**	0.001**	0.015**	0.013*
	(1.66)	(1.48)	(2.52)	(2.36)	(1.97)	(1.72)
$Log(Assets)$		0.051***				
		(60.92)				
P&L		0.603***		0.006***		-0.001
		(19.42)		(24.66)		(-0.57)
Nr. employees		0.168***		0.001***		-0.003***
		(11.45)		(10.45)		(-9.03)
Year dummies	No	Yes	No	Yes	No	Yes
Controls	No	Yes	No	Yes	No	Yes
Geographical dummies	No	Yes	No	Yes	No	Yes
Industry dummies	No	Yes	No	Yes	No	Yes
Fixed effects	No	No	No	No	No	No
Observations	1896749	1668490	1595560	1409131	235951	223519
Adjusted R-squared	0.000	0.024	0.000	0.025	0.000	0.035

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Post 2013 is a dummy variable equal to 1 from 2014 onwards. $Log(Assets)$ not included for the second and the third outcomes because assets are the denominator of the ratio. DA stands for direct awards, nr for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. employees are in hundred of employees. The number of observations varies due to either the inclusion of controls or of lags in the ratio analysed.

Table 11: Results for becoming politically connected to the winning party. Outcome variables: Number of government related contracts, ratio between government related contracts' volume and company's lagged assets and ratio between government related direct awards' volume and company's lagged assets

For direct awards, firms connected to the winner displayed a ratio 0.013 percentage points higher than those not connected. This can be translated into an increase of 1808.7€ in volume $(139\,130.5 * 0.013)$. Just like in the main treatment, the ratio of contracts' volume over lagged assets increased by 0.001 percentage points for treated companies. However, regarding the

number of contracts obtained, they displayed a smaller magnitude (0.034, which compares to 0.043 and 0.045 in the baseline results) and the impact was ambiguous since it disappeared when controls and dummies were included.

8 Extension

Still exploiting the DiD features, we now present an additional specification which allows to investigate companies that had changed their status in the 2013's elections.

The crucial aspect that distinguishes this new model from the main DiD presented in the previous part is that it enables, not only to explore changes occurring in companies that were not connected in 2009, but also on those that already had a connection. Just like before, here we may compare firms that, in 2013, altered from not connected to connected– the NC – with those that were not connected and remained so after the elections – NN. Moreover, we are also able to do the same exercise but comparing companies that were connected in 2009 and lost their status in 2013 – CN – with those that already had these political relations and kept them – CC. To formalise the design, let t denote the year of 2014 and $t-4$ the period 4 years before t.[18] Basically, these consist in the two electoral periods studied. Any difference that may emerge from comparing companies that changed their status with the ones that did not, can be attributed to the status' variation (the treatment).

$$y_{it} = \beta_0 + \beta_1 D_{it-4} + \beta_2 D_{it} + \alpha_i + \rho_s + \lambda_t + X_{it}\beta + \epsilon_{it} \tag{3}$$

For the previous equation, y_{it} is again the outcome variable of individual i in period t, D_{it} and D_{it-4} are dummy variables indicating companies politically connected at t and $t-4$, X_{it} a vector with financial controls and α_i, ρ_s and λ_t local, industry and year dummies.

Note that, for the purpose of the analysis, β_2 is the only parameter of interest. This is the case because we are looking for firms that depart from the same initial situation, for example, for all of those that were connected, the effect of remaining connected, as opposed to losing the connection is given by β_2.[19] The same applies when the reverse happens, if we compare NN

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[18]Remember that, even though elections took place at the end of 2013, the post treatment period for the analysis only starts in 2014.

[19]By subtracting both equations the following is obtained: $(\beta_0 + \beta_1 + \beta_2)-(\beta_0 + \beta_1) = \beta_2$ (Note that, to simplify

with NC, the difference is again given by β_2 (note that this time it has the opposite sign).

	Nr. contracts	Volume/Assets$_{t-1}$
	(1)	(1)
Connected09*Post09	0.054***	0.001***
	(5.96)	(6.91)
Connected13*Post13	0.101***	0.001***
	(6.39)	(9.14)
$Log(Assets)$	0.053***	
	(61.83)	(63.48)
P&L	0.644***	0.003***
	(20.33)	(12.42)
Nr. employees	0.177***	0.001***
	(11.81)	(9.28)
Year dummies	Yes	Yes
Controls	Yes	Yes
Geographical dummies	Yes	Yes
Industry dummies	Yes	Yes
Fixed effects	No	No
Observations	1726059	1456196
Adjusted R-squared	0.025	0.030

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). $Log(Assets)$ not included in the second outcome because assets are the denominator of the ratio. Nr. stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. employees are in hundred of employees. The number of observations varies due to the inclusion of lags in the ratio analysed.

Table 12: Extra specification. Treatments: Connected in 2009 and connected in 2013. Outcomes: Number of gov. related contracts and volume of gov. related contracts over lagged assets

Coefficients obtained for the main treatment (Connected13*Post13, Table 12) are positive and statistically significant at a 1% level. Table 12 depicts that, status variation, f.e. changing from non-connected to connected, leads to an increase of 0.101 in the number of contracts and to an improvement of 0.001 percentage points in the volumes' over assets ratio.

9   Conclusions, limitations and further research

The present paper used variation arising from the 2013's Portuguese municipal elections to estimate the effect of political connections on firms' ability to celebrate government related contracts.

We analysed how two possible measures of political connection - politically connected and connected to the winning party - have an impact on a range of possible outcomes - number of contracts made by local government contracting entities, ratio between companies' government related contracts' volume and their lagged assets, ratio of government related direct awards'

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the example, one is omitting all other variables included in equation (3)).

volume and companies' lagged assets and probability of obtaining a contract. Results illustrated the existence of positive significant effects, proving that political connections not only eased the access to public contracts, but also promoted an increase on their value - this corroborated previous studies and literature.

Conclusions were driven by companies situated in small councils and effects were amplified for companies that contracted above the sample median. Findings were robust when restricting the sample only to the mainland. According to the extensive and intensive margins, the probability of obtaining a contract increased for companies connected and effects were amplified when excluding firms that did not have contracts between 2009 and 2017.

Furthermore, for connections established with the winning party, less competitive procedures led to contracts with larger volumes. For the analysis where we focused on contracts granted via direct awards, it was inferred that companies related to the winning party faced an increase on the ratio between direct awards' volume and the company's lagged assets. For the remaining outcomes, most coefficients of interest were also significant. Additionally, we estimated that, while for companies with political connections the increase in contracts' volume was around 139.130€, for those that obtained direct awards and were connected with the winner, the rise in volume was of 1808.7€, approximately.

A major limitation faced was that there were few transitions to analyse. Generally speaking, the sample was vastly dominated by companies that never had a connection.

Additionally and as mentioned on Section 4, we would like to acknowledge that endogeneity issues can be plotted. In future research, a Regression Discontinuity Design which would take the vote share obtained by candidates as source of quasi-random variation could be used as a way to deal with the potential caveat of reverse causality. This analysis should focus only in a sample of connected companies and the treatment - connections to the winner party- could be instrumented with the percentage of votes each politician would get. Given that, from a certain vote share onwards, the probability of being elected as mayor would possibly face a drastic increase (approaching a probability of 1), the vote share could be used as instrumental variable. Nonetheless, the validity of this methodology would rely on several assumptions namely, on the existence of a discontinuity in the outcome variable around the threshold and on the absence of jumps on observables, also around the threshold. RDD would provide a local average treatment effect that could be pointed out as causal given that, around the threshold, assignment to

treatment would be random. This way, the endogeneity problem would be eliminated.

As Do et al. (2015) reported on their paper, due to lack in direct links of concurrent employment between corporations and politicians, it is extremely difficult to clearly identify and empirically study potential political connections. Having said this, it is crucial to emphasise that any result found will be considered a lower bound since coefficients will, most likely, be underestimated. Additionally, we were not accounting for political connections established via familiar/close friendship ties.

As a last remark, the present paper was the first study conducted in the Portuguese economy concerning this topic. We believe that this dissertation contributes to the literature on the impact of political connections on companies since it relies on a rich dataset which comprises useful informations and it presents a plausible justification for the increase on firms' value once they become connected: the public procurement channel.

References

Acemoglu, D., Johnson, S., Kermani, A., Kwak, J. & Mitton, T. (2016), 'The value of connections in turbulent times: Evidence from the United States', *Journal of Financial Economics* **121**(2), 368–391.

Akcigit, U., Baslandze, S. & Lotti, F. (2018), Connecting to Power: Political Connections, Innovation, and Firm Dynamics, CEPR Discussion Papers 13216, C.E.P.R. Discussion Papers.

base: Contratos Públicos Online (2017).
   URL: *http://www.base.gov.pt/Base/pt/PerguntasFrequentes*

Brogaard, J., Denes, M. & Duchin, R. (2015), Political Connections, Incentives and Innovation: Evidence from Contract-Level Data, Technical report, Foster School of Business, University of Washington.

Brugués, F., Brugués, J. & Giambra, S. (2018), Political Connections and Misallocation of Procurement Contracts: Evidence from Ecuador, Technical report, Development Bank of Latin America.

Dicko, S. (2016), Firms Political Connections and Winning Government Contracts, Technical report, School of Management, Universite du Quebec a Montreal, Montreal, Canada.

Do, Q.-A., Lee, Y.-T. & Nguyen, B. D. (2015), Political Connections and Firm Value: Evidence from the Regression Discontinuity Design of Close Gubernatorial Elections, Sciences Po publications 10526, Sciences Po.

ECO (2019), 'Empresários portugueses são os que mais se queixam de "ligações políticas"'.

Fan, J. P. H., Wong, T. J. & Zhangb, T. (2007), 'Politically connected CEOs, corporate governance, and Post-IPO performance of China's newly partially privatized firms', *Journal of financial economics* **84**(2), 330 – 357.

Ferraz, C., Finan, F. & Szerman, D. (2016), Procuring Firm Growth: The Effects of Government Purchases on Firm Dynamics, NBER Working Papers 21219, National Bureau of Economic Research, Inc.

Fisman, R. (2001), Estimating the Value of Political Connections, 91 4, 1095-1102.

Goldman, E., Rocholl, J. & So, J. (2013), 'Politically Connected Boards of Directors and The Allocation of Procurement Contracts', *Review of Finance* **17**(5), 1617–1648.

Johnson, S. & Mitton, T. (2003), 'Cronyism and capital controls: evidence from Malaysia', *Journal of Financial Economics* **67**(2), 351–382.

Khwaja, A. I. & Mian, A. (2005), 'Do Lenders Favor Politically Connected Firms? Rent Provision in an Emerging Financial Market', *The Quarterly Journal of Economics* **120**(4), 1371–1411.

OECD (2016), 'Preventing Corruption in Public Procurement'.

OECD (2017), 'Businesses' attitudes towards corruption in the EU'.

Rijkers, B., Freund, C. & Nucifora, A. (2014), All in the Family : State Capture in Tunisia, World Bank Other Operational Studies 20542, The World Bank.

Çeviker Gürakar, E. & Ildiri, T. B. (2016), Political Connections and Public Procurement in Turkey: Evidence from Construction Work Contracts, Working Papers 1053, Economic Research Forum.

10 Appendix

Event studies performed evaluate the treatment effect on a yearly basis.

Table 13 includes two event studies . (1) takes as outcome variable the number of government related contracts and (2) the ratio between government related contracts' volume and company's lagged assets. Coefficients show that, for the number of government related contracts and for the ratio between contracts' volume and the lagged assets, there is a positive significant effect three years after the implementation of the treatment. This may suggest that firms take some time to celebrate contracts.
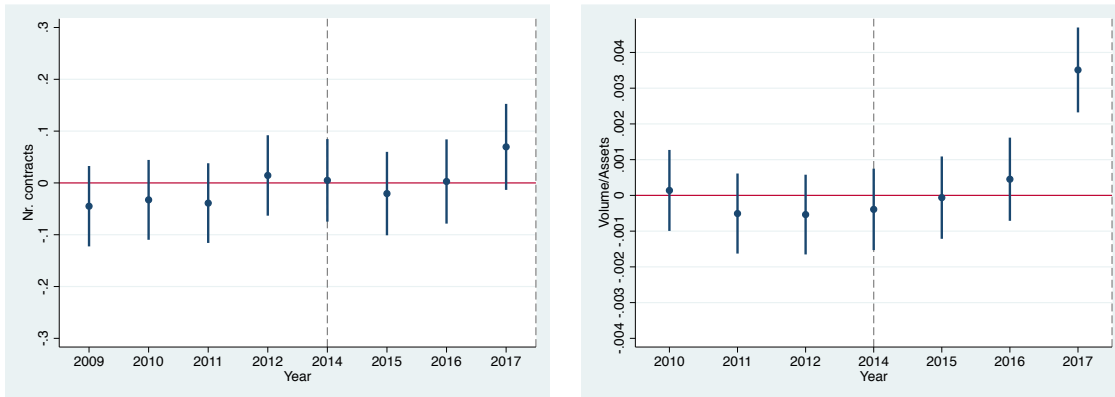
	Nr. contracts	Volume/Assets$_{t-1}$
	(1)	(2)
Connected	0.023	0.001***
	(1.17)	(3.27)
Connected*2009	-0.010	
	(-0.34)	
Connected*2010	-0.004	0.000
	(-0.15)	(0.61)
Connected*2011	-0.018	-0.000
	(-0.71)	(-0.20)
Connected*2012	0.005	-0.000
	(0.15)	(-1.03)
Connected*2014	0.006	-0.001
	(0.21)	(-1.40)
Connected*2015	-0.004	0.000
	(-0.14)	(0.38)
Connected*2016	0.050	0.000
	(1.22)	(0.78)
Connected*2017	0.117**	0.003***
	(2.18)	(3.59)
$Log(Assets)$	0.052***	
	(60.89)	
P&L	0.609***	0.006***
	(19.64)	(24.58)
Nr. employees	0.171***	0.001***
	(11.55)	(10.53)
Year dummies	Yes	Yes
Controls	Yes	Yes
Geographical dummies	Yes	Yes
Industry dummies	Yes	Yes
Fixed effects	No	No
Observations	1677978	1417176
Adjusted R-squared	0.025	0.026

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Connected*year is a variable that interacts the treatment with each year. Due to multicollinearity, the last year of the pre-treatment period was omitted.$Log(Assets)$ not included in the second outcome because assets are the denominator of the ratio. Nr. stands for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Employees are in hundred of employees. The number of observations varies due to the inclusion of lags in the ratio analysed.

Table 13: Event study. Treatment: Connected. Outcomes: Number of gov. related contracts and volume of gov. related contracts over lagged assets

10.1 Validity of the common trend for the extra analysis

Here we present evidence that supports the validity of the common trends assumption. Figure 3 and 4 depict graphs of the event studies made for the treatment of being connected to the winner.

Notes: Event studies for two outcome variables. Treatment: Connected to the winning party. On the left-hand side we have the number of contracts and on the right-hand the ratio between contracts' volume and assets. The second outcome does not have information for 2009 due to the lag included in the ratio.

Figure 3: Event studies
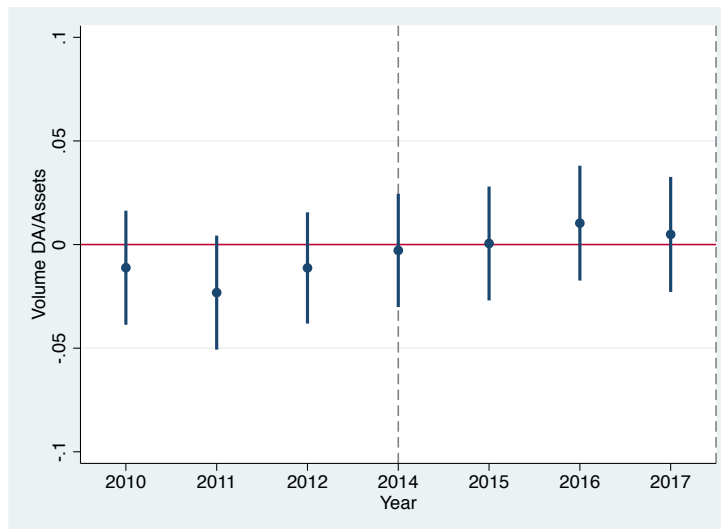
Notes: Event study.Treatment: Connected to the winning party. Outcome variable: Ratio between gov. related direct awards and the company's lagged assets. This outcome does not have information for 2009 due to the lag included in the ratio.

Figure 4: Event study

	Nr. contracts	Volume/Assets$_{t-1}$	Volume DA/Assets$_{t-1}$
	(1)	(2)	(3)
Winner	0.025	0.001**	0.013
	(0.85)	(2.30)	(1.18)
Winner*2009	-0.044		
	(-1.22)		
Winner*2010	-0.032	0.000	-0.010
	(-0.80)	(0.26)	(-0.63)
Winner*2011	-0.041	-0.001	-0.023
	(-1.17)	(-0.70)	(-1.52)
Winner*2012	0.016	-0.001	-0.012
	(0.29)	(-1.01)	(-0.88)
Winner*2014	0.005	-0.001	-0.004
	(0.12)	(-0.86)	(-0.27)
Winner*2015	-0.021	-0.000	-0.000
	(-0.56)	(-0.13)	(-0.03)
Winner*2016	0.000	0.000	0.006
	(0.01)	(0.54)	(0.37)
Winner*2017	0.073	0.004***	0.006
	(1.21)	(2.88)	(0.37)
$Log(Assets)$	0.051***		
	(60.92)		
P&L	0.603***	0.006***	-0.001
	(19.42)	(24.66)	(-0.56)
Nr. employees	0.168***	0.001***	-0.003***
	(11.45)	(10.45)	(-9.03)
Fixed effects	No	No	No
Observations	1668490	1409131	223519
Adjusted R-squared	0.024	0.025	0.035

Notes: t-stats are in parenthesis. Stars indicate significance levels of 10% (*), 5% (**) and 1% (***). Post 2013 is a dummy variable equal to 1 from 2014 onwards. $Log(Assets)$ not included for the second and the third outcomes because assets are the denominator of the ratio. DA stands for direct awards, Nr for number and P&L for profits and losses of the period. Volume of contracts and assets are in euros. Contracts are in units. P&L are in millions of euros. Nr. employees are in hundred of employees. The number of observations varies due to the inclusion of lags in the ratios analysed.

Table 14: Event studies. Treatment: Connected to the winning party. Outcome variables: Number of gov. related contracts, volume of gov. related contracts over lagged assets and volume of gov. related direct awards over lagged assets