Takeover of Local Governments, Public Procurement Performance, and Public Service Delivery

Fatih Serkant Adiguzel* Mustafa Kaba† Murat Koyuncu‡

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Abstract

We analyze how public procurement processes are affected when central governments take control of local governments. We use a novel data set on the universe of all state contracts from Turkey and a quasi-experimental setting where some elected mayors were replaced with government-appointed trustees by the central government. Using a regression discontinuity design, we specifically focus on how auction methods, procurement outcomes, and public service provision change due to these appointments. Our findings show that trustee mayors display a higher level of discretion by opting for less competitive auction methods than their elected counterparts. The increased level of discretion in turn translates into worse procurement outcomes in terms of rebate value, price, and cost of the contract. Furthermore, we document that trustee mayors decrease spending on critical public services such as health and education while distributing more contracts to make security-related purchases.

*Assistant Professor of Political Science, Faculty of Arts and Social Sciences, Sabancı University & Research Fellow, Harvard Kennedy School

†Senior Research Fellow, Max Planck Institute for Research on Collective Goods

‡Associate Professor of Economics, Boğaziçi University

1 Introduction

It is known that dictators share rents with loyal elites to ensure the stability of their regimes (Blaydes 2010; De Mesquita et al. 2005) while checks and balances limit the rulers' ability to distribute rents in consolidated democracies (Acemoglu, Robinson, and Torvik 2013; Persson et al. 1997). The previous research has also shown that electoral competition, a vertical accountability mechanism, limits rent distribution in democracies (Broms et al. 2019; Coviello and Gagliarducci 2017) while they enable a rent distribution system in autocracies (Blaydes 2010; Magaloni 2008; Reuter et al. 2016). As a result, democracies provide more public good and welfare than non-democracies (Min 2015; Przeworski et al. 2000; Sen 1999).

In competitive authoritarian regimes, which are characterized by the absence of horizontal checks with competitive (though unfair) elections (Esen and Gumuscu 2016; Levitsky and Way 2010), the channels of rent creation and their impact on public service provision is less clear. On the one hand, vertical accountability (i.e., competitive elections) still works despite the unfair electoral processes, making opposition wins likely in some cases (Bunce and Wolchik 2010; Levitsky and Way 2010). Electoral incentives can still limit the distribution of rents by creating uncertainty for political offices and disciplining politicians. Therefore, according to both normative (Mill 2004 [1861]) and formal democratic theory (Acemoglu and Robinson 2005), electoral incentives should make politicians heed the demands of the masses and enact policies in line with the preferences of the median voter (Meltzer and Richard 1981).

However, re-election incentives with no effective checks and balances can also lead politicians to increase targeted spending toward citizens and elites. The previous literature has shown that politicians divert money away from areas that benefit citizens the most (e.g., public services) and instead increase targeted spending to increase their re-election possibility (Keefer and Khemani 2005; Khemani 2015). While politicians target masses with specific pork-barrel policies to increase their re-election chances, they lure elites by granting business favors such as tax breaks or state contracts since elites reciprocate the favor with political

campaign donations or bribes (Gulzar et al. 2021; Mironov and Zhuravskaya 2016). Electoral incentives, therefore, can also distort the public good provision by increasing targeted spending and political rent for electoral support.

We argue that despite the negative impacts of electoral incentives in a setting with no checks and balances, elected politicians still get less leeway to distribute political rents and targeted spending than appointed counterparts who are not checked by either vertical or horizontal institutions of accountability and act as agents for the central government. The complete absence of checks on appointed politicians translates into higher discretion, which brings more corrupt practices than their elected counterparts.

Leveraging unique public procurement data from Turkey, a country witnessing democratic backsliding, we analyze how electoral pressures affect rent distribution and public service provision in local governments. To examine the effects of re-election concerns, we compare the terms and outcomes of state contracts distributed by government-appointed trustees before and after their appointment to their respective municipalities.

The results show that municipalities distribute significantly more contracts with more discretionary methods after trustees start working as mayors compared to their elected counterparts. Trustee-appointed municipalities are more likely to distribute contracts with non-open auction methods and use exceptional clauses in the legislation during the auction processes. A contract becomes more likely to be given via non-open auction methods and under exceptional clauses by around 34%.

Using such discretionary auction methods, we find that trustees changed the composition of public services provided. After trustees took over municipalities, they provided fewer public services in education and health, the two most critical public services for citizens. Instead, trustee-run municipalities started providing more public service in security, mostly in the form of increased surveillance.

The results also show that the increased discretionary methods in state contracts do not seem to impact prices or estimated costs. The average price and estimated cost of a contract

are not significantly different before and after the trustees' takeover. However, when we look at contracts distributed with non-open methods, we see a different picture: trustee appointment increases contract price by around 1/4 of the standard deviation in non-open contracts. We further show that trustees distribute significantly more contracts (in absolute terms) than their elected predecessors. We take this as evidence that trustees divide a single work into multiple contracts to avoid threshold requirements. Since the procurement law dictates open auction methods, which require much regulation and higher transparency, if the estimated cost of a work is above a certain threshold, trustees are more likely to divide the work into multiple contracts to stay below thresholds and use non-open auction methods.

Our paper contributes to the democratic accountability literature and sheds light on the nature of elections in competitive authoritarian regimes. It aims to contribute to two strands of literature and brings them closer. Firstly, scholars have made important contributions to our understanding of rent distribution systems in autocracies (Blaydes 2010; Magaloni 2006). Similarly, various studies focus on democracies and the disciplining effect of re-election motivations (De Janvry et al. 2008; Ferraz and Finan 2011). However, scant attention has been paid to competitive authoritarian regimes and how their unique combination of competitive (though unfair) elections and the absence of checks and balances impact rent distribution.

It is crucial to understand the dynamics of rent creation in competitive authoritarian regimes since the post-Cold War period witnessed the proliferation of these regimes (Levitsky and Way 2010). Since these regimes display great variation in terms of stability (Bunce and Wolchik 2010; Lucardi 2016), understanding what makes them stable provides great insights into competitive authoritarian regimes.

2 Theory

Do elected local officials perform better than their unelected counterparts appointed by the central government? According to the democratic accountability literature, the answer is yes. Competitive elections create an accountability mechanism in which citizens reward politicians that work for the common good and punish those that use offices for private gain (Ashworth 2012; Manin et al. 1999). The leaders in democracies need to heed the needs of the masses (Mill 2004 [1861]), because failure to do so can cost their seats. Indeed, the empirical evidence suggests that autocratic states enjoy higher political rents and provide fewer public services compared to democracies (Lake and Baum 2001; Przeworski et al. 2000).

The recent evidence aligns with the democratic accountability mechanism: while citizens reward public service provision (Adiguzel et al. Forthcoming; Kaba 2022), and punish corrupt practices (Ferraz and Finan 2008), politicians also respond to increased vertical accountability in competitive districts (Grossman and Michelitch 2018). Even in settings with widespread corruption, incumbents can be punished electorally for their corrupt practices (Klašnja 2015). This reward and punishment mechanism suggests that elected officials should engage in less corrupt activities than their unelected counterparts since elections have the disciplining power on the former.

However, it is not theoretically clear how elections can discipline elected officials in more authoritarian settings for various reasons. Relying on the insights from the previous literature, we identify two different mechanisms of how elections do not necessarily discipline politicians: information manipulation and rent distribution.

First, the democratic accountability mechanism assumes informed citizenry. However, getting accurate information about politicians' performance is more difficult in weak democracies and competitive authoritarian regimes. Autocrats engage in various forms of media capture to manipulate the information environment (Knight and Tribin 2019a; Knight and Tribin 2019b; Rozenas and Stukal 2019; Szeidl and Szucs 2021). They are so effective in manipulating the informational environment that they are even called "informational autocrats"

(Guriev and Treisman 2019).

Therefore, citizens might not know about the corrupt practices of elected officials, limiting the effectiveness of the democratic accountability mechanism. This information mechanism for our context implies that elections may not have a disciplining effect on elected officials. It suggests that there might be no difference between elected and unelected officials regarding corrupt practices in authoritarian settings with extensive information manipulation because citizens cannot check politicians' performances.

In addition to the information manipulation mechanism, rent distribution is another mechanism of why we may not see differences between elected and appointed politicians. Elections can work significantly differently in authoritarian regimes than in democracies. In particular, re-election incentives can drive politicians to engage in more corrupt practices. Elections in an authoritarian context can help solve the distributional problem among the elites by controlling who accesses political rents (Blaydes 2010). If anything, elections regulate the distribution of political rents, but they can not limit using political offices for private gains. They instead provide an institutional setting in which politicians exchange favors to increase their chances of winning the seat. For instance, firms support politicians with campaign donations during the election campaign, and politicians award firms with hefty state contracts in return (Boas et al. 2014; Gulzar et al. 2021).

In addition to political rents to elites, politicians also use targeted transfers to the masses to increase their re-election chances. Politicians need to "sweat" to win the seat in competitive authoritarian regimes (Levitsky and Way 2010). This requires a disciplined party organization, which usually relies on local political rents (Handlin 2016; Magaloni 2006). Therefore, elected officials use their resources to keep the mass party organization intact at the local level.

As a result, when elections are the mechanisms for rent distribution channels, their capacity to discipline elected officials decreases dramatically, especially in settings with high corruption and mass party organizations. This implies that elected officials do not necessarily

perform better than unelected counterparts, as suggested by the democratic accountability mechanism, because they will have to distribute political rents to those who helped them secure the seat.

That being said, however, one should also look at the incentives faced by unelected officials. In our setting, the central government appointed unelected officials to take over opposition-run municipalities. According to the arguments above, elected officials may not be better in terms of corruption due to electoral pressures. However, there are various reasons why these government-appointed mayors are not likely to behave better.

First, as outlined above, running a mass party organization requires political rents. However, despite being unfair, the competitive nature of elections in competitive authoritarian settings means that there is a severe possibility of opposition wins.[1] Therefore, losing elections can cause disruptions in rent distribution channels for the government.

All elected mayors who were replaced with government-appointed trustees were from opposition parties. This suggests that the central government was unable to use these municipalities to control and distribute rent distribution channels before appointing trustee mayors. Hence, after trustees were appointed, it could be that the central state used them to set up their own rent distribution channels at the local level. As a result, even though these unelected officials lack electoral motivations, they might also be likely to engage in various forms of rent distribution as agents of the central government.

In addition to serving the political interests of the central government, unelected officials can also have other motivations to engage in corruption. Since they do not operate in a vacuum but are embedded into various social networks with private interests (Romero 2020; Romero 2021), they can behave no more differently than elected officials. Indeed, recent evidence shows that bureaucracies embedded in local networks can be captured by elites when they are not held accountable by the public (Bhavnani and Lee 2018).

Therefore, elected and unelected officials can both engage in corrupt exchanges, although

[1]For instance, in Turkey's last local elections, the government lost all metropolitan municipalities such as İstanbul and Ankara, which disrupted local rent distribution channels.

their motivations differ. In the next section, we briefly discuss the Turkish case and the background of the trustee appointments to certain opposition-run municipalities.

3 Brief Background of the Trustee Appointments

Dismissal of the elected mayors and the resulting appointment of the trustee mayors were possible thanks to the state of emergency declared in the wake of the failed *coup d'état* of 15 July 2016. During the state of emergency that continued for two years, the Turkish government legislated through emergency decree laws arguing that these were necessary to dismantle the "Gülenist network," which was behind the coup and had penetrated deeply into the Turkish State. However, the emergency decrees were also used to target the pro-Kurdish opposition even though the two movements were clearly hostile against each other. People's Democratic Party (HDP) and its sister party, Democratic Regions Party (DBP), which held the majority of the municipal offices in the Kurdish provinces, came under attack with the emergency decree law no 674 of 1 September 2016.[2] This decree amended the municipal law, making it possible for the government to replace elected mayors, deputy mayors or council members if there were charges against them in relation to offenses of aiding and abetting terrorism and terrorist organizations, by trustees appointed by the state authorities[3] [4].

The replacement of the elected mayors started on September 11th, 2016, with 24 mayors being sacked and continued throughout the state of emergency, removing 94 elected mayors out of 104 in 18 months. OHCHR (2017) reports that "In most cases, the "trustees" were

[2]Official Gazette, September 1, 2016: https://www.resmigazete.gov.tr/eskiler/2016/09/20160901M2-2.htm

[3]Most of these charges were made under the rather far-reaching anti-terrorism law of Turkey. Transnational observers have repeatedly criticized this law due to "its broad and excessively vague definition of terrorism, organized crime and propaganda," arguing that it acts as "an instrument for the repression of internal dissent" (EU 2016).

[4]Another example was the dismissal of nearly twelve thousand teachers, who were all reportedly union members and had participated in a strike calling for a peaceful solution to the armed conflict between the government and the armed separatist group, PKK, claiming that they were terrorists. Even some NGOs with an anti-poverty focus were shut down under the same legislation (Bozarslan 2016). The Turkish government also targeted the pro-Kurdish media, shuttering outlets such as the news channel IMCTV and more than 20 others accused of airing "terrorist propaganda" (Gunter 2018).

appointed immediately following the arrest of the democratically elected officials, indicating a high degree of coordination between the judiciary and the executive branches." Venice Commission of the Council of Europe also called the Turkish government "to repeal the provisions introduced by the Decree Law N° 674 which are not strictly necessitated by the state of emergency, in particular concerning the rules enabling the filling of vacancies in the positions of mayor, vice-mayor, local council member, by the way of appointments" (EU 2017).

Before presenting our results on how these appointments changed procurement methods and outcomes and public service delivery in impacted municipalities, we present our data and empirical strategy.

4 Empirical Framework

4.1 Data description

In this study, we use an administrative data set covering the universe of state contracts in Turkey between 2011 and 2019. This dataset is made publicly available by the Turkish Public Procurement Institution (*Kamu İhale Kurumu*) in its electronic platform. It provides detailed information at the contract level, including but not limited to the method of procurement auction (*open auction, exceptional auction*, etc.); whether the auction had a single bidder; rebate value, price, and estimated cost of the contract; type of the procurement (*construction, goods,* or, *services*); industry code of the procurement; name, district, and the province of the procuring state agency; auction approval and contract dates.

We use several variables from this data set as our outcome of interest. We first focus on outcomes that are informative of the level of discretion displayed by the procuring state agency. In this regard, we use *Non-open auction* (identifying whether the procuring method was an open auction or not), *Exceptional auction* (identifying whether the procuring agency used exceptional clauses of the public procurement legislation), and *Single bidder* (identifying

whether there was a single bidder for the auction).

To assess the procuring performance in terms of public interest, we focus on two sets of outcomes related to the terms of contracts and public service provision. Regarding the terms of contracts, we focus on the price of the contract, the estimated cost of the procurement, and the rebate value. We calculate the rebate value as follows:

$$\text{Rebate value} = \frac{\text{Expected Cost} - \text{Contract Price}}{\text{Expected Cost}}$$

This definition of *Rebate value* above implies that higher values of it are more favorable in terms of public interest as those values indicate a higher discount rate since the relative difference between expected costs and contract price increases.

To investigate the changes in the public services provision, we focus on the specific purchases identified using the information on the sector code from which the purchases are made. These codes are quite granular and allow us to identify the specific goods/services purchased by each procuring agency. Using these codes, we identified state contracts for the following public services: health, education, culture, environment, security, and other (garbage/sewage/recycling services, utility services, and postal services) public services.

We supplement this contract-level procurement data with several data sets. We first include information on the appointments of trustee mayors. This data set includes the dates of the trustee appointments and the municipalities that were appointed a trustee mayor. As our main variable of interest, we define the treatment status for contract i in province k at time t as the following:

$$\text{Trustee Mayor}_{ikt} = \begin{cases} 1 & \text{if contract } i \text{ in province } k \text{ at time } t \text{ is granted by a trustee mayor} \\ 0 & \text{otherwise.} \end{cases}$$

We then include administrative data from the Turkish Statistical Institute (*TUIK*) on

the number of business enterprises and population size at the district (*ilçe*) level. We also include nightlight data at the district level to proxy for the level of economic development.

4.2 Empirical strategy

We want to test whether trustee mayors appointed by the state use different procurement practices and whether, if any, such different practices yield different terms of outcomes than their elected counterparts. Accordingly, we run our estimations on a sample of state contracts granted by the municipalities to which a trustee mayor was appointed at some point.

Our analysis is based on three different sets of outcomes related to i) procurement auction methods, ii) procurement terms of outcomes, and iii) the types of public services purchased. We first focus on outcomes related to procurement auction practices, specifically the decisions related to the methods with which procurement auctions are held. Accordingly, our first outcome is the *Non-open Auction*, which indicates whether the contract is given with a non-open auction method. Non-open auction methods give more discretion to the procuring agency and, therefore, it is more likely to be used by more corrupt agencies. The second outcome, *Exceptional Auction*, indicates three specific clauses that give the procuring agency the to use non-open auctions under certain special circumstances such as national security and emergency. However, such clauses can be used by procuring agencies even when no underlying circumstance justifies their usage. Our third outcome indicates whether there exists only a single bidder in the procurement auction, which can be used as a proxy for the competitiveness of the bidding process.

Since procuring agencies have both *de jure* and to some extent *de facto* discretion in deciding which methods to use in a procurement auction, the choices regarding the auction method exhibit substantial variation and are particularly informative about how much discretion is enjoyed by different mayors. Therefore, the backbone of our analysis is to estimate the effect of trustee appointments on procurement auction practices. To this end, we first run an ordinary least squares (OLS) estimation on our full sample. We then supplement our

OLS estimates with a regression discontinuity in time (RDiT) estimation to establish the causal nature of our estimates.

To further strengthen the credibility of our causal estimates, we run a placebo analysis on a sample of procurement auctions held by *provincial* and *district special administrations*, which are not affected by trustee appointments even though these special administrations operate within the same district or province with the impacted municipalities. This analysis adds further credibility to our results since it allows us to show that results are not driven by unobserved district-level time trends that affect all contracts distributed in municipalities that are nested in districts.

Our second set of outcomes relates to the terms of contracts, which are the results of the procurement auctions. We specifically focus on rebate value, the price of the contract, and the estimated cost of procurement. The terms of contracts, among many things, depend on the auction method (e.g., non-open, exceptional) and the type of procurement (construction, goods, services). It is because the law defines certain thresholds above which only open auction methods can be used. As a result, costlier contracts have to be distributed with open auction methods by law. Hence, we conduct a heterogeneity analysis and control for the auction method to analyze whether contract prices are different across elected and appointed mayors conditional on auction method and type.

Our last set of outcomes focuses on purchases for specific public services. We specifically focus on the effects of trustee appointments on purchases related to health, education, culture, environment, security, and other public services (garbage/sewage/recycling services, utility services, and postal services).

OLS estimation

Our first empirical strategy is based on a before and after comparison through an OLS estimation. We specifically compare the procurement practices of municipalities before and after they were appointed a trustee mayor on a sample of all contracts distributed by municipali-

ties that were appointed a trustee at some point between 2011 and 2019. Econometrically, we estimate the following equation:

$$\begin{aligned} Y_{ikt} &= \beta_0 + \beta_1 \times \text{Trustee mayor}_{ikt} + \beta_2 \times \text{Procurement type}_i + \\ &\quad \beta_3 \times \text{Procurement sector}_i + \beta_4 \times \text{X}_{kt} + \delta_k + T_t + \epsilon_{ikt} \end{aligned}$$

where Y_{ikt} is the outcome of contract i granted in district k at time t. *Procurement type* is a categorical variable with three levels (*construction, goods, services*) and denotes the broad category of the purchase. *Procurement sector* represents the industry code of procurement. X_{kt} is a vector of time-variant characteristics of the districts, including population size, number of businesses to proxy the number of competitors, and the level of light at night to proxy the level of development. δ_k and T_t are, respectively, province and year dummies to account for time-invariant characteristics of provinces and potential time effects. We cluster the standard errors at the municipality level.

Trustee mayor is the main variable of interest and indicates whether the contract i was granted by a trustee mayor. We are therefore interested in the estimate of β_1 coefficient. The main problem with estimating the effect of trustee appointments using OLS is that the appointment of trustees might be endogenous to the procurement practices of these municipalities. For example, municipalities that exploit their discretion in public procurement auctions more might also be more likely to be appointed a trustee. Next, we run a regression discontinuity in time analysis to address this endogeneity problem.

Regression discontinuity in time (RDiT) estimation

In this section, to enable a causal interpretation of our OLS estimates in the previous section, we run a regression discontinuity in time (RDiT) analysis. Our analysis is essentially based on a comparison of procurement auctions that were held just before and just after the trustee

appointment. Accordingly, our running variable is the number of days relative to the trustee appointment days. The cut-off value is set as 0, with treated units falling to the right of the cut-off and untreated units falling to the left.

We start by graphically showing whether our outcome variables exhibit a discontinuity at the cut-off. Figures 1, 2, and 3 plot, respectively, the distribution of the share of non-open auctions, exceptional auctions, and auctions with single bidder based on the number of days relative to the trustee appointment. Whereas the share of auctions with a single bidder displays a continuous distribution at the cut-off, the shares of non-open and exceptional auctions show a clear positive jump at the cut-off.

To quantify this jump, we estimate the effects of trustee appointment separately on the probability of non-open, exceptional, and single-bidder auctions using a regression discontinuity (RD) estimation following Calonico et al. (2015). In our main RD analysis, we use a non-parametric approach with a triangular kernel and allow for different bandwidths at different sides of the cut-off. The bandwidth on both sides is chosen to minimize the mean-squared error (MSE).[5] We cluster the standard errors at the municipality level.

[5]In a robustness test, we impose identical bandwidth on both sides of the cut-off and show that our results remain the same.

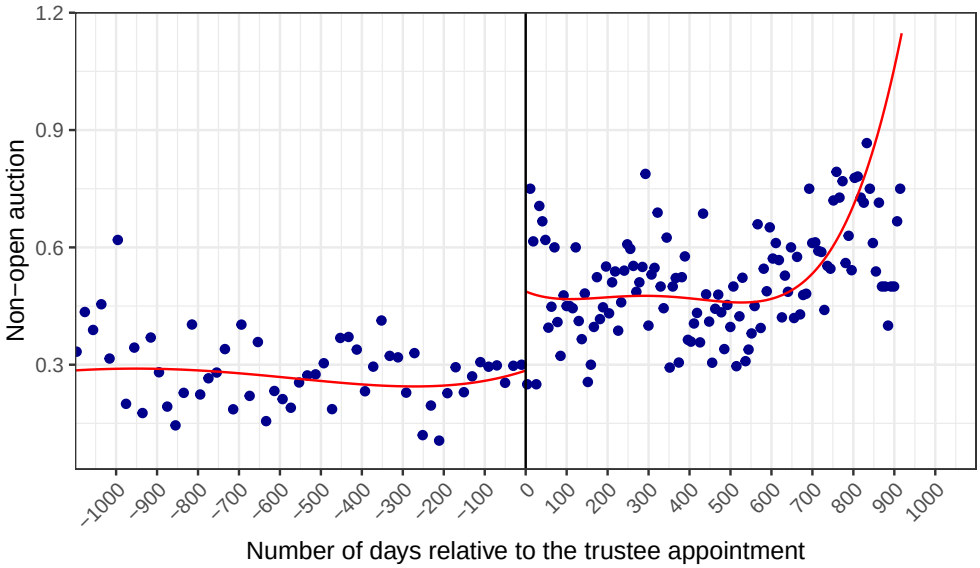

Figure 1: The RD plot of non-open auctions before and after trustees took over the municipalities (with evenly spaced mimicking variance number of bins using spacings estimators). Polynomials of order 4 are fitted for each side of the cutoff using triangular kernel (Calonico et al. 2015).

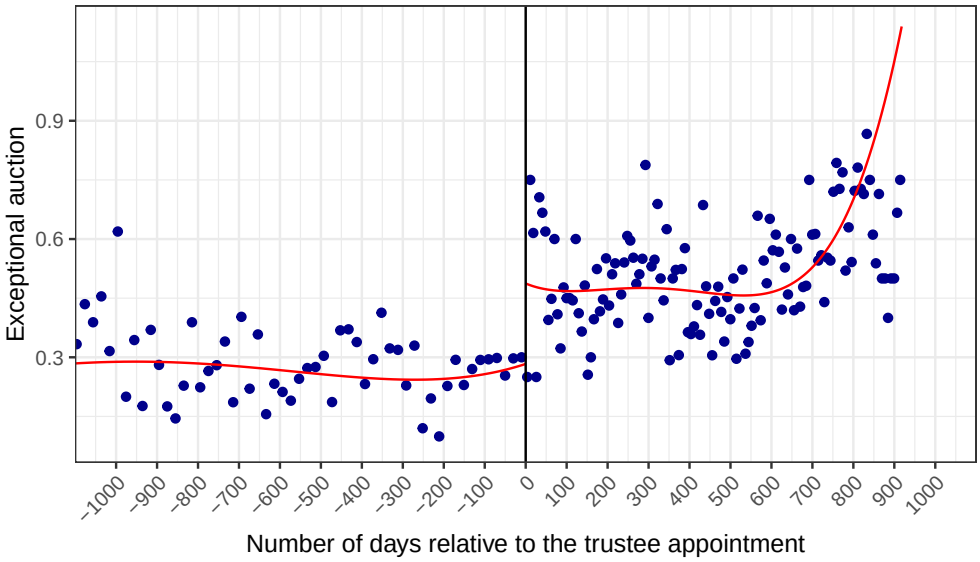

Figure 2: The RD plot of exceptional auctions with single bidders before and after trustees took over the municipalities (with evenly spaced mimicking variance number of bins using spacings estimators). Polynomials of order 4 are fitted for each side of the cutoff using triangular kernel (Calonico et al. 2015).

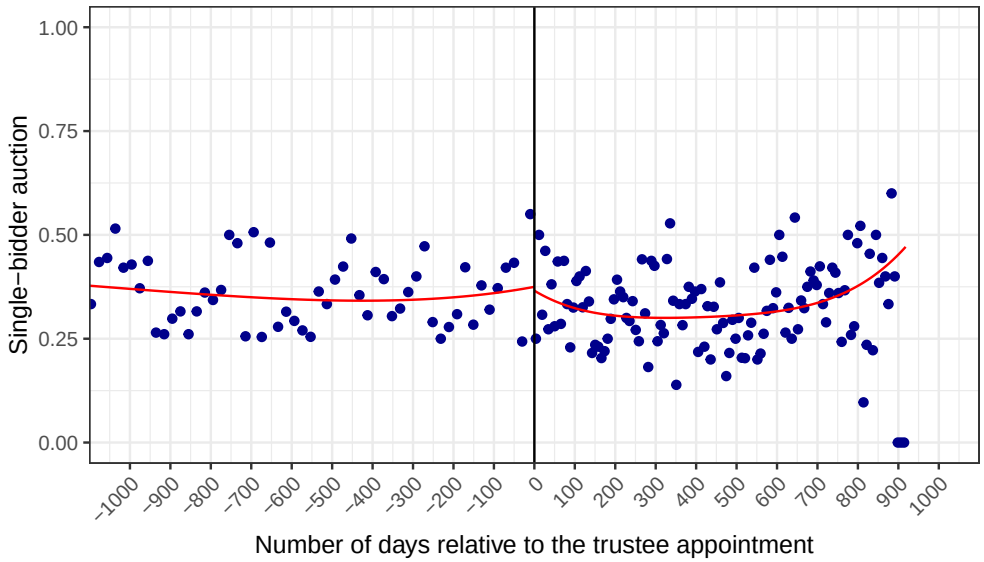

Figure 3: The RD plot of auctions with single bidders before and after trustees took over the municipalities (with evenly spaced mimicking variance number of bins using spacings estimators). Polynomials of order 4 are fitted for each side of the cutoff using triangular kernel (Calonico et al. 2015).

5 Results

In the following subsections, we first present our results from OLS and RDiT estimations for the trustee effects on procurement methods. We then discuss how these trustee effects translate into different procurement outcomes and public services provision in the remaining subsections.

5.1 Trustee effects on procurement methods

We first present results by looking at whether trustees displayed increased discretion in distributing state contracts. As outlined above, we constructed three variables that could signal increased discretion over the distribution of contracts: whether the contract was given as a result of a non-open auction (*Non-open auction*), whether exceptional clauses are applied during the auction process (*Exceptional auction*), and whether there is only one bidder or

not in the auction (*Single bidder*).

The results are presented in Table 1, which broadly support the argument that trustee mayors enjoyed significantly more discretion over the distribution of contracts. In the first model in which the outcome is *Non-open auction*, the results indicate that trustee mayors used non-open auctions by almost 34% more than their elected counterparts. Similarly, exceptional clauses are more likely to be applied in trustee-run municipalities (again, 34%). These results are substantively sizeable: 39% of all auctions are distributed with non-open methods. The effect translates into 0.8 of the standard deviation of both non-open and exceptional auctions. When we shift our attention to the last model, we observe that there has been no change in the number of single bidders after the trustees took over municipalities.

Table 1: Trustee effect on procurement methods

	Non-Open Auctions		Exceptional Auctions		Single bidder	
	OLS	RD	OLS	RD	OLS	RD
Trustee mayor	0.338***	0.202**	0.338***	0.204***	0.009	-0.083
	(0.046)	(0.062)	(0.046)	(0.062)	(0.044)	(0.061)
Num.Obs.	10200	10200	10200	10200	10200	10200
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes	Yes	Yes
Kernel		Triangular		Triangular		Triangular
R2	0.159		0.162		0.116	
R2 Adj.	0.157		0.159		0.113	
RMSE	0.44		0.44		0.45	
Num.Obs.Effective.Left		1894.000		1884.000		1795.000
Num.Obs.Effective.Right		1230.000		1224.000		912.000

Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Alternative mechanisms

In previous section, we documented the causal effect of trustee appointments on public procurement methods using a RD design. This design compares the auctions that are just before and just after the trustee appointments using a limited time window at both sides

of the cut-off to ensure comparability. However, due to the staggered occurrence of trustee appointments, some alternative mechanisms may arise to explain the estimated difference in procurement methods under elected and trustee mayors.

One such alternative mechanism is the possibility of elected mayors changing behavior after witnessing the first set of trustee appointments that took place on September 11, 2016. For example, if elected mayors, who witnessed the first set of appointments, consequently decrease the share of non-open and exceptional auctions, then the treatment effect estimated in previous section cannot be solely attributed to the trustee mayors using a higher level of discretion. To show that this was not the case, we repeat our main analysis in Table 1 on a sample of auctions that are only held by the municipalities that were appointed a trustee on September 11, 2016. This exercise rules out the possibility of elected mayors changing behavior because they witnessed other mayors being replaced with trustee mayors.

Table 2 presents the results of this analysis. Our results remain qualitatively similar to the ones in 1, assuring that the estimated treatment effects are not driven by lower levels of discretion used by elected mayors after witnessing their counterparts in other municipalities being sacked and replaced by trustee mayors.

Table 2: Alternative Mechanism

	Non-Open Auctions		Exceptional Auctions		Single bidder	
	OLS	RD	OLS	RD	OLS	RD
Trustee mayor	0.247***	0.191*	0.250***	0.187*	-0.074	-0.251**
	(0.056)	(0.090)	(0.056)	(0.092)	(0.052)	(0.079)
Num.Obs.	2752	2752	2752	2752	2752	2752
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes	Yes	Yes
Kernel		Triangular		Triangular		Triangular
R2	0.176		0.178		0.130	
R2 Adj.	0.168		0.170		0.121	
RMSE	0.44		0.44		0.45	
Num.Obs.Effective.Left		460.000		438.000		391.000
Num.Obs.Effective.Right		349.000		336.000		107.000

Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Placebo test

To further strength the credibility of our results, we conduct a placebo analysis on a sample of contracts distributed by special administrations. This particular unit of administration is responsible for public procurement in areas that do not fall within the borders of their corresponding municipality in provinces and districts. That is, although they operate in the same district or province as municipalities, they focus on areas outside the municipality's borders. Given that the trustee appointments impacted municipalities but not the provincial and district special administrations, we repeat our analysis in the previous section on this placebo sample of contracts given by special administrative units.

More specifically, to estimate the placebo effect of trustee appointments on the probability of non-open, exceptional, and single-bidder auctions, we repeat the OLS and RD estimation in the previous section on our placebo sample.[6] Our results in Table **??** show that all OLS and RD coefficient estimates of the effect of trustee appointments are close to zero and

[6]See Appendix for RD plots on the placebo sample.

statistically non-distinguishable from zero at conventional significance levels.

Table 3: Placebo effects

	Non-Open Auctions		Exceptional Auctions		Single bidder	
	OLS	RD	OLS	RD	OLS	RD
Trustee mayor	0.097	0.027	0.065	0.009	0.043	-0.017
	(0.089)	(0.076)	(0.084)	(0.075)	(0.057)	(0.069)
Num.Obs.	3783	3783	3783	3783	3783	3783
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes	Yes	Yes
Kernel		Triangular		Triangular		Triangular
R2	0.204		0.206		0.188	
R2 Adj.	0.198		0.201		0.182	
RMSE	0.38		0.38		0.37	
Num.Obs.Effective.Left		330.000		333.000		212.000
Num.Obs.Effective.Right		570.000		570.000		318.000

Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

5.2 Trustee effects on procurement outcomes

Although these results suggest that trustees enjoyed increased discretion over the distribution of state contracts, they do not necessarily imply that discretion increases corrupt practices. There is a trade-off between increased discretion and regulation. While discretionary practices can increase corruption since it gives more power to the procuring agency, extensive regulations can also bring about unnecessary costs. Some evidence from the literature suggests that increased discretion allows bureaucrats more space to display their expertise, which increases efficiency and helps public finance. For instance, evidence from the US shows that higher regulation causes worse outcomes because of increased red tape (Carril 2020). Similarly, others find that increased discretion brings about better outcomes for the Italian case (Coviello, Guglielmo, et al. 2018).

Therefore, we conducted additional analyses in Table 4 to see whether this increased discretion by a higher number of non-open auctions and exceptional clauses translates into

outcomes in the form of lower rebates and higher prices. The results in Table 4 from the first model indicate that rebate values decreased by around 2.7% after trustees were appointed. This suggests lower discount rates for the municipalities. On the other hand, trustee mayors do not seem to have an impact on the real price or average cost of auctions, as seen from the second and the third model.

Table 4: Trustee effects on procurement outcomes

	Rebate		Real price (log)		Approximate cost (log)	
	OLS	RD	OLS	RD	OLS	RD
Trustee mayor	-0.029*	-0.032+	-0.093	0.181	-0.122	0.218
	(0.012)	(0.019)	(0.116)	(0.147)	(0.116)	(0.166)
Num.Obs.	10159	10159	10200	10200	10200	10200
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes	Yes	Yes
Kernel		Triangular		Triangular		Triangular
R2	0.171		0.185		0.207	
R2 Adj.	0.169		0.182		0.204	
RMSE	0.14		1.23		1.24	
Num.Obs.Effective.Left		1828.000		1746.000		1725.000
Num.Obs.Effective.Right		924.000		1318.000		1359.000

Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Taken together, these results imply that trustees used greater discretion than their elected counterparts. As a result, there has been a decline in rebate values but not in contract prices or estimated costs, which is puzzling since rebate is a function of both contract price and estimated cost. To further understand what drives these results, we first plotted the total number of monthly contracts in Figure 4.

This figure reveals that trustees not only increased the share of non-open auctions, as we showed before, but they also distributed more contracts after their takeover. While the average number of monthly contracts within two years before their appointment was 99 in a given municipality, it increased to 142 in the next two years following their appointments,

bringing an increase of 43%.

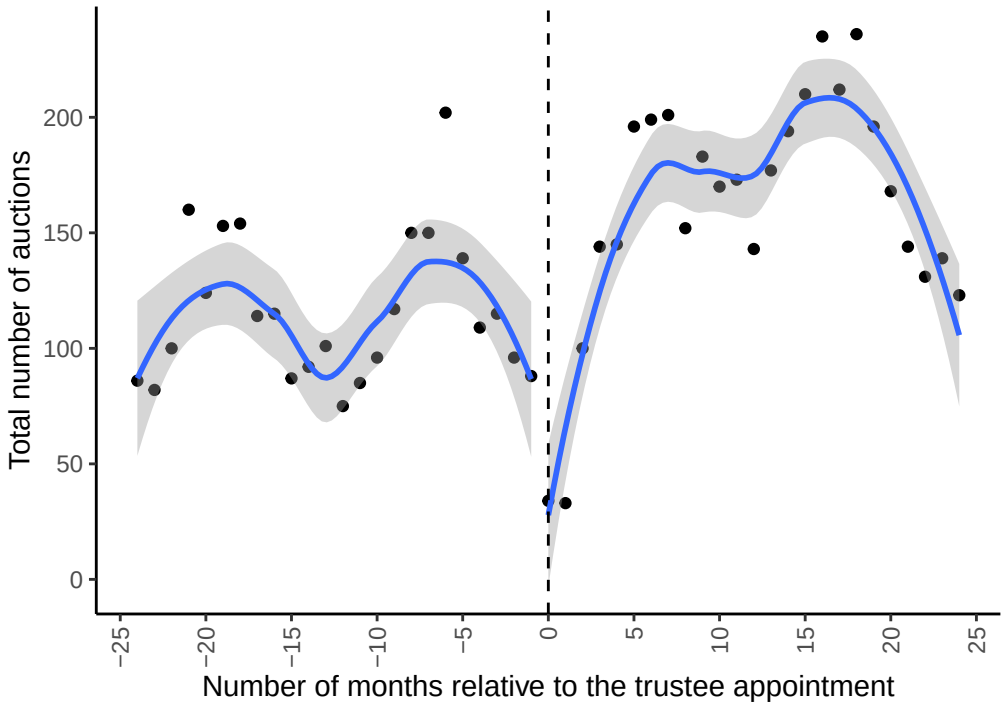

Figure 4: The total monthly number of auctions before and after trustees took over the municipalities.

Figure 5 shows that this increase is purely driven by the increase in the number of contracts distributed with non-open auction methods. These results imply that trustees started distributing more non-open auctions relative to open auctions, which drives the results presented above in Table **??**.

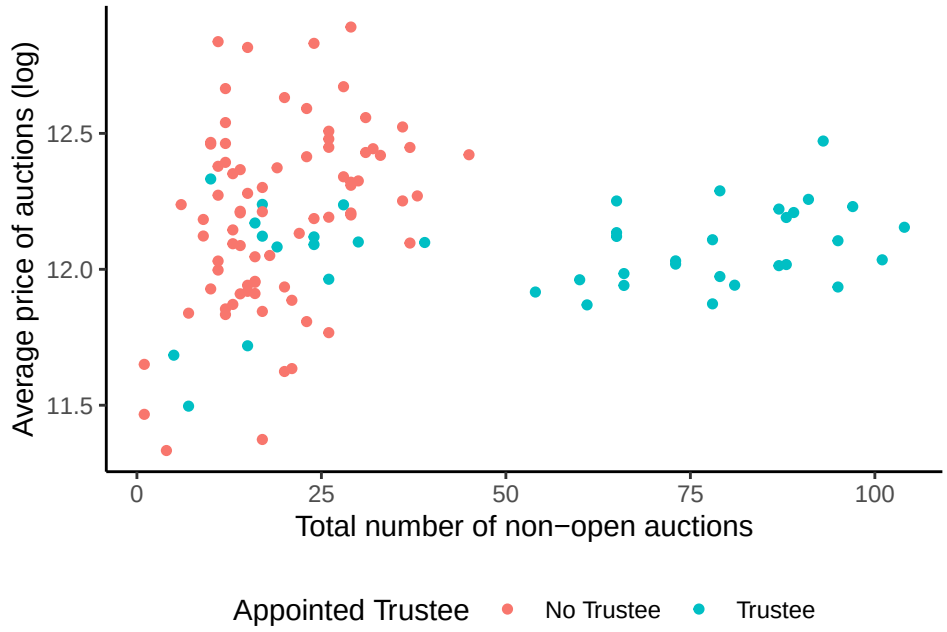

Figure 5: Average price of contracts before and after trustees took over the municipalities (monthly)

Since trustees distributed significantly more contracts with non-open auction methods, we further analyze how they impact the contract outcomes. In Table **??** below, we repeated the analysis in Table 4 but interacted our main independent variable, *Trustee mayor* with *Non-open auctions* to see how non-open auction results differ when trustees take over the municipalities.

These results show that both contract prices and estimated costs increase significantly in trustee-run municipalities when the auction is non-open. The effect is around $1/4th$ standard deviation of the outcome. Also, note that the price for non-open auctions is significantly lower than open auctions because of the threshold effect. Since the open auction method is required for all contracts above certain price thresholds, the price for non-open auctions is mechanically lower by the legal design. However, the difference in price between elected mayors and trustee mayors is significant. This shows that state contracts distributed with non-open auction methods cost more to the public when trustees take over the municipalities. Similarly, the public enjoys less discount (by around 2.6%) when trustees use non-open

auction methods.

We can see the interaction effects more clearly in the prediction plot below (Figure 6). While the predicted contract price is similar across trustee-run municipalities and others for open auctions, the difference becomes significant in non-open auctions, which translates to around a 2% price increase.

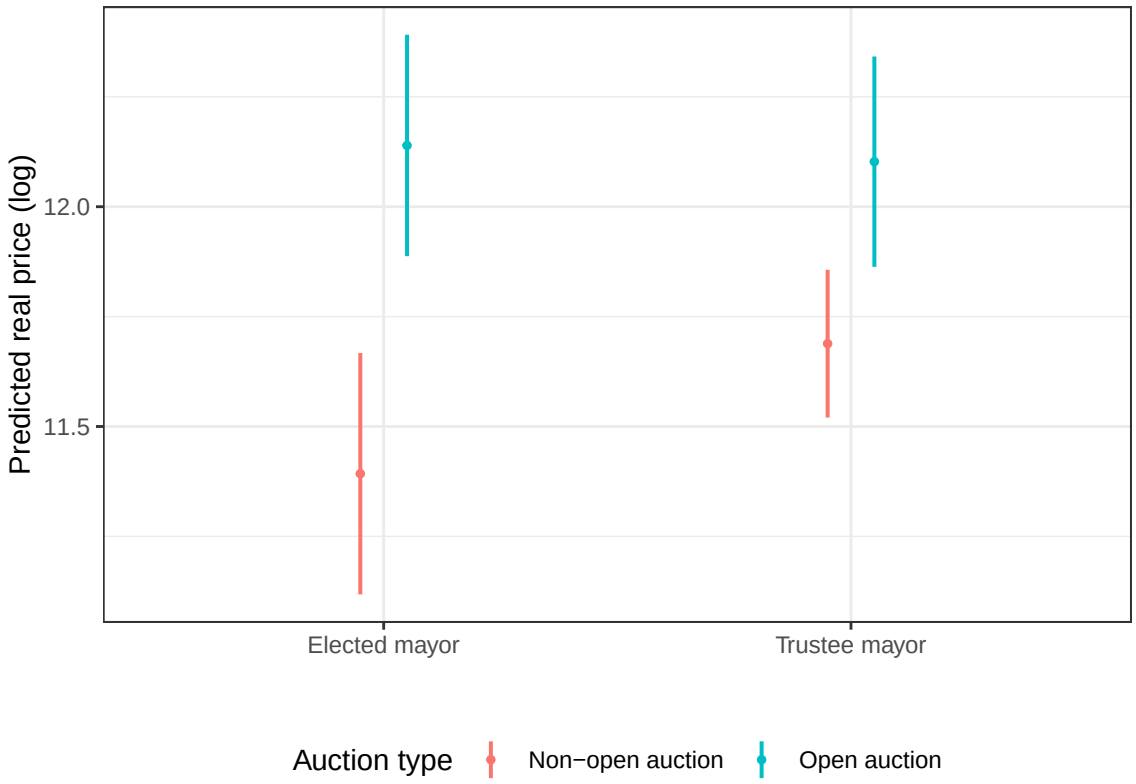

Figure 6: Marginal effect of auction type across auction and mayor types

5.3 Trustee effects on public service provision

This section analyzes how public service provision changes due to trustee appointments. We are particularly interested in any shift from social service purchases (e.g., education- and health-related) to purchases that are related to security purposes. More specifically, we focus on the change in the probability of the purchase of a specific public service after a

trustee was appointed. Accordingly, our analysis compares the probability of procurement in health, education, culture, environment, security, and other public service sectors under a trustee mayor and an elected mayor using the following econometric specification:

$$\begin{aligned}\text{Public service type}_{ikt} &= \gamma_0 + \gamma_1 \times \text{Trustee mayor}_{ikt} + \gamma_2 \times \text{Procurement type}_i + \\ &\quad \gamma_3 \times \text{X}_{kt} + \delta_k + T_t + \mu_{ikt}.\end{aligned}$$

where Public service type$_{ikt}$ is contract i in district k at time t about one of the public services we are interested in. The rest of the variables are as defined before, and we cluster the standard errors at the municipality level.

The results are presented in Table 8. We find that, after a trustee mayor is appointed, the probability of a purchase related to health and education decreases, respectively, by 0.4 and 0.1 percentage points. These effects translate into a 0.06 and 0.1 decrease in standard deviation. On the other hand, the probability of a purchase related to security increases by 5 percentage points, which is around 0.6 increase in the standard deviation of the outcome. These findings imply that, when the central government takes control of local governments, not only this results in worse procurement outcomes but also a decrease in critical public services such as health and education. Instead, central governments make more security-related purchases, likely reinforcing their control of the region.

Table 6: Trustee effects on public service provision

	Health	Education	Culture	Environment	Other public	Security
Trustee mayor	-0.004*	-0.011**	-0.004	0.005	0.029	0.049**
	(0.002)	(0.004)	(0.004)	(0.016)	(0.025)	(0.017)
Population (log)	0.003	-0.003	0.002	-0.002	-0.028*	0.000
	(0.002)	(0.004)	(0.001)	(0.003)	(0.012)	(0.003)
Number of businesses (log)	-0.001	0.000	-0.001	0.003	0.007	0.000
	(0.001)	(0.003)	(0.001)	(0.003)	(0.011)	(0.002)
Nighlight (normalized)	-0.004	0.022	-0.004	0.000	-0.037	0.011
	(0.007)	(0.017)	(0.003)	(0.010)	(0.036)	(0.010)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes	Yes	Yes
Num.Obs.	10200	10200	10200	10200	10200	10200
R2	0.019	0.045	0.011	0.024	0.222	0.024
R2 Adj.	0.016	0.042	0.008	0.021	0.220	0.021
RMSE	0.06	0.10	0.05	0.08	0.22	0.08

Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

We also report public services that exhibit the most dramatic changes after trustees took over municipalities. To do that, we calculated the share of contracts devoted to a specific public service before and after the trustee appointment and listed the ten public service types that showed the greatest change across trustee and elected mayors. The results in Table 7 show that 93% of all contracts about education services were distributed by elected mayors, while trustee mayors distributed only 7% of all contracts about education services. The public services in which trustees overwhelmingly make purchases are security, publications, and clothing. Further inspection of state contracts in these services reveals that security contracts are mostly about security camera purchases. Publications are mostly about brochures and billboards, while clothing is mostly for personnel clothing and targeted social assistance (such as for newborn babies).

Public Service Type	Trustee Status	Number of Contracts	Share
education services	0	110	0.93
security	1	62	0.86
postal services	0	5	0.83
publications	1	40	0.83
agriculture/gardening services	0	54	0.82
public services(utility)	0	45	0.80
machine setup services	0	4	0.80
repair services	0	152	0.79
clothing	1	54	0.76
garbage/sewage/recycling services	0	470	0.75

Table 7: Public services that exhibit the most dramatic changes after trustee appointments

5.3.1 Placebo analysis

Similar to our previous placebo analyses, we conducted a placebo analysis using public services as our outcomes of interest. Due to fewer observations, we can only do this analysis for health, education, and security. The results from the placebo analysis can be found in Table **??**. As expected, both health & education (combined due to a small number of observations in health services) as well as education display null effects, giving further credence to our results above. When we focus on security services, however, we see a negative effect, which is the opposite result from the previous analysis.

Table 8: Placebo effects on public service provision

	Health & Education	Education	Security
Trustee mayor	0.003	-0.003	-0.022+
	(0.006)	(0.005)	(0.012)
Population (log)	0.024	0.019	0.018
	(0.081)	(0.082)	(0.011)
Number of businesses (log)	-0.021	-0.019	-0.018
	(0.085)	(0.086)	(0.011)
Nighlight (normalized)	-0.168	-0.162	0.094*
	(0.204)	(0.205)	(0.037)
Year FE	Yes	Yes	Yes
Province FE	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes
Num.Obs.	3783	3783	3783
R2	0.565	0.604	0.035
R2 Adj.	0.562	0.601	0.028
RMSE	0.12	0.11	0.08

Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

6 Conclusion

This paper uses original data on state contracts from Turkey to study how state-appointed mayors differ from their elected counterparts in terms of the state contracts they distribute. The result shows that state-appointed, *trustee*, mayors use methods that allow much more discretion: they are more likely to distribute contracts with non-open auctions and use exceptional clauses during the procurement process.

Although these results do not translate into worse outcomes in terms of the average contract price and estimated cost, we show that this is indeed driven by the fact that trustee mayors distribute many more state contracts with non-open methods than their elected counterparts. Conditional on the procurement method, trustee-run municipalities distribute state contracts with higher prices and estimated costs, and lower rebate values.

Since the law requires using open auction methods if the estimated cost is above a certain price threshold and the evidence shows that trustee-run municipalities distribute many more

non-open auctions, we take this as evidence that trustees divide a single work in multiple contracts and distribute them with non-open methods. Although this keeps the contract price unchanged on average, our analysis shows that contracts distributed with non-open auctions cost more to the public in trustee-run municipalities relative to others.

The results also show that municipalities changed the composition of public services once trustees took them over. In particular, trustee-run municipalities started distributing fewer state contracts about education and health, the two most critical public services for citizens. Instead, they allocated more money to state contracts for security, which are contracts mostly about surveillance.

These results show that elected officials can behave much more disciplined than their unelected counterparts, even in democratically backsliding countries such as Turkey. Since elections are still competitive despite their unfair nature, politicians' re-election motivations seem to discipline them even though partisan resource allocation plays a critical role in sustaining local party networks. The results show that elected mayors show at least more restraint than fellow mayors with no such electoral concerns.

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7 Appendix

7.1 Placebo RD plots

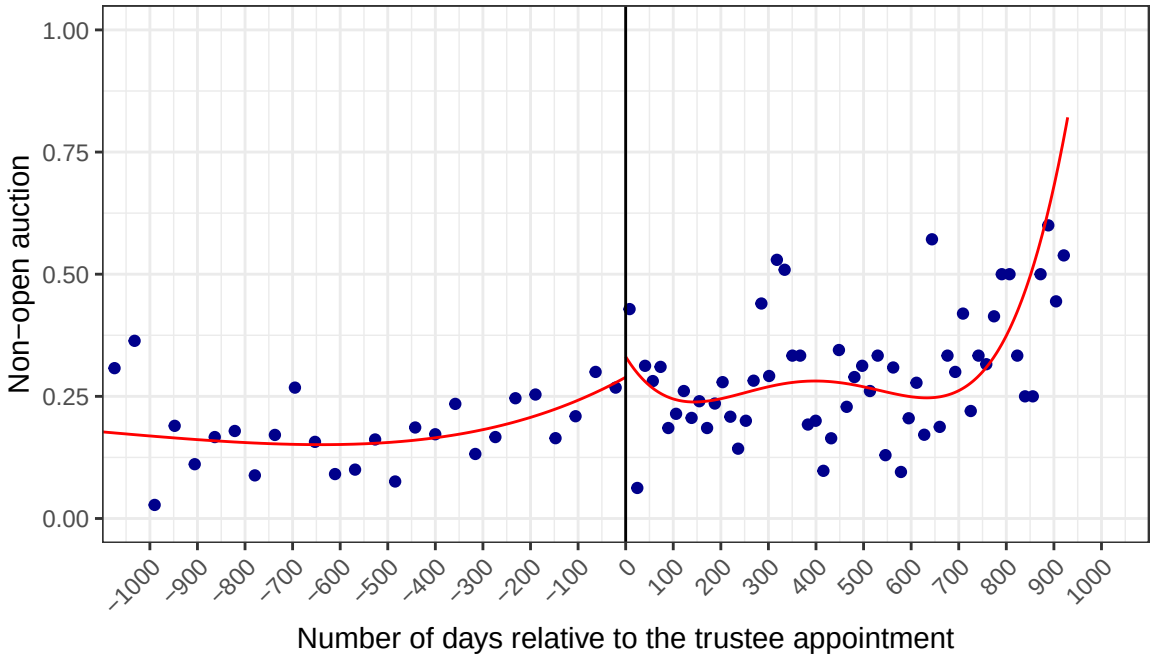

Figure 7: The RD plot of non-open auctions by IL OZEL IDARESI, before and after trustees took over the municipalities (with evenly spaced mimicking variance number of bins using spacings estimators) . Polynomials of order 4 are fitted for each side of the cutoff using triangular kernel (Calonico et al. 2015).

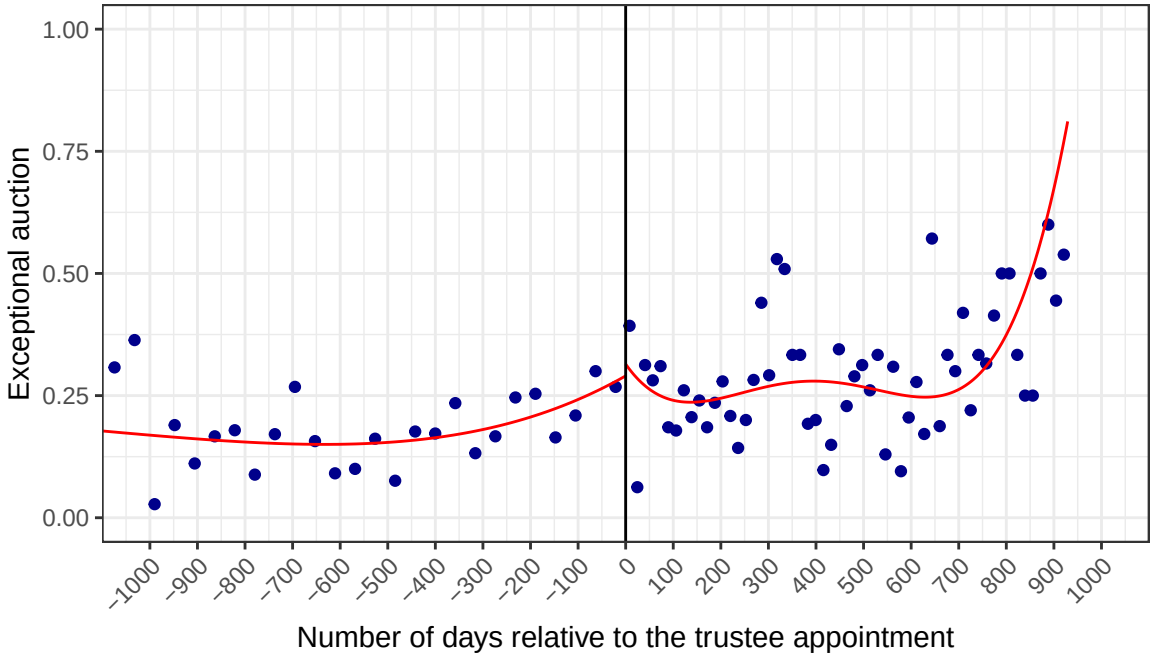

Figure 8: The RD plot of exceptional auctions by IL OZEL IDARESI, before and after trustees took over the municipalities (with evenly spaced mimicking variance number of bins using spacings estimators). Polynomials of order 4 are fitted for each side of the cutoff using triangular kernel (Calonico et al. 2015).

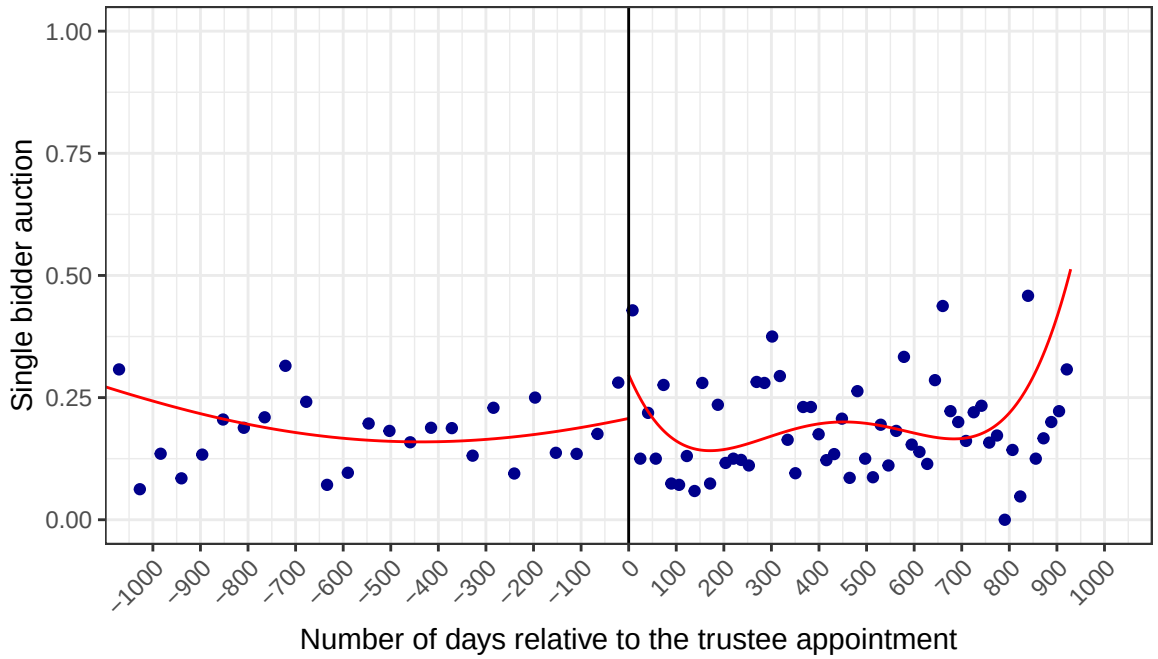

Figure 9: The RD plot of auctions by IL OZEL IDARESI with single bidders, before and after trustees took over the municipalities (with evenly spaced mimicking variance number of bins using spacings estimators). Polynomials of order 4 are fitted for each side of the cutoff using triangular kernel (Calonico et al. 2015).

7.2 Robustness RD plots: first batch of appointments

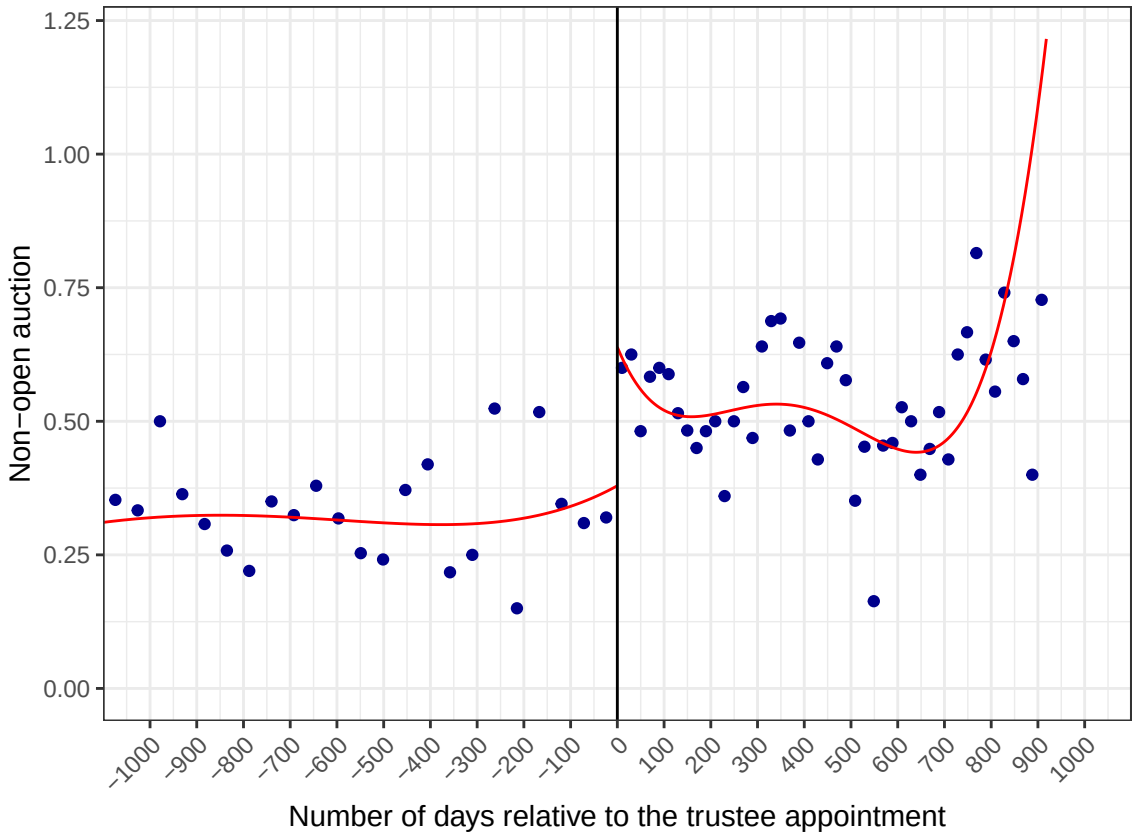

Figure 10

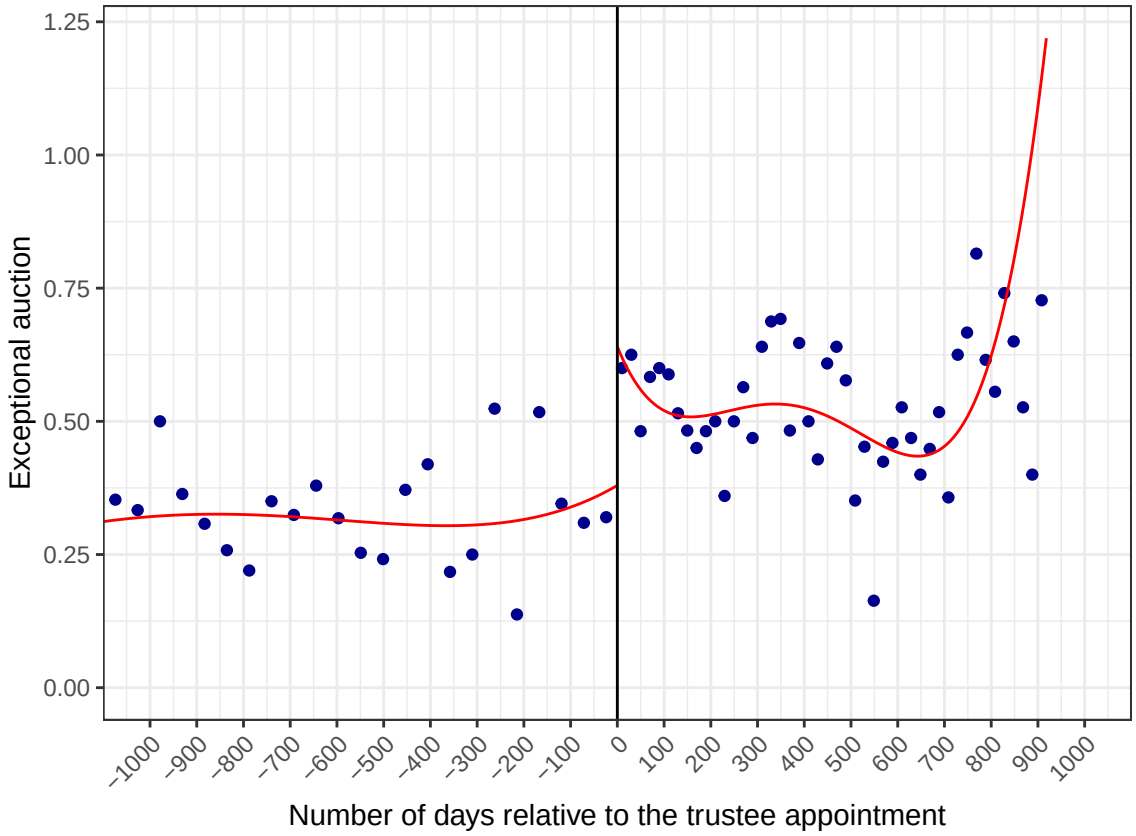
1.25
1.00
0.75
0.50
0.25
0.00
Exceptional auction
−1000
−900
−800
−700
−600
−500
−400
−300
−200
−100
0
100
200
300
400
500
600
700
800
900
1000
Number of days relative to the trustee appointment

Figure 11

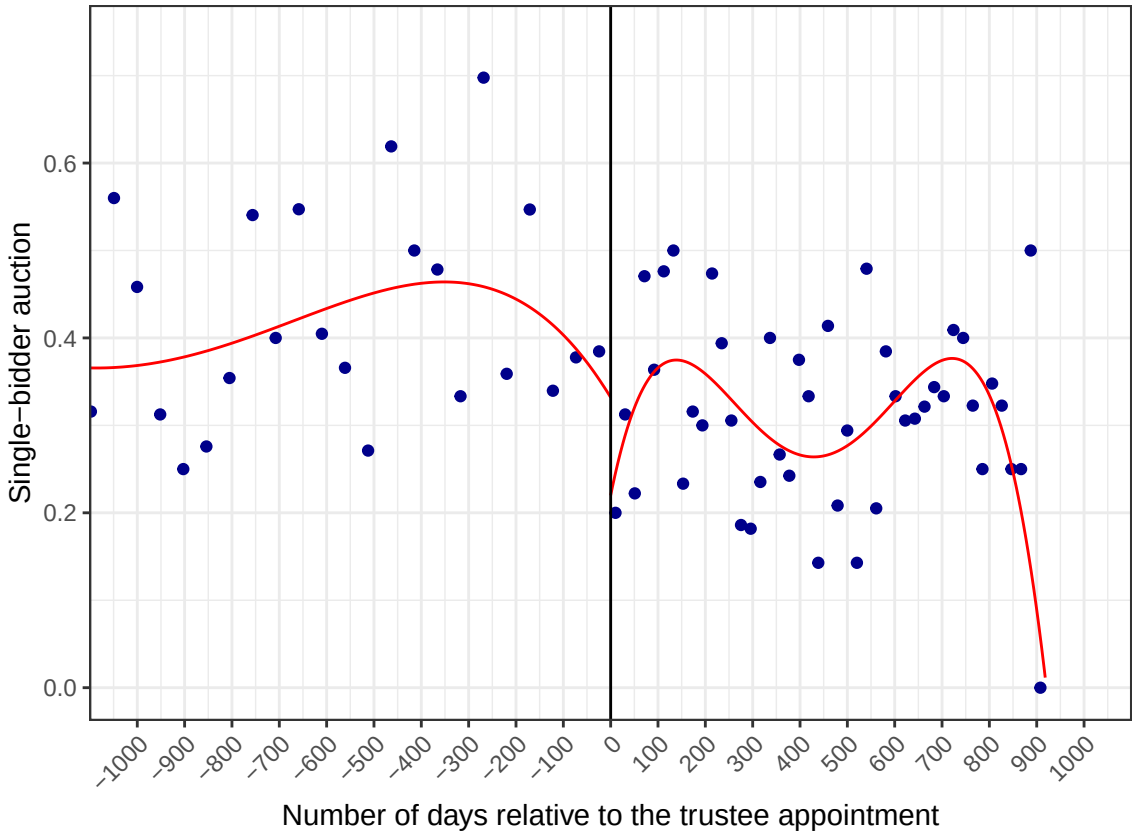
Single−bidder auction
0.0
0.2
0.4
0.6
−1000
−900
−800
−700
−600
−500
−400
−300
−200
−100
0
100
200
300
400
500
600
700
800
900
1000
Number of days relative to the trustee appointment

Figure 12