From Elected to Appointed: The Economic Consequences of Local Authoritarian Takeovers*

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Abstract

Replacing local elected officials with centrally appointed executives, a strategy adopted by authoritarian governments, hurts the rule of law and economic efficiency. Analyzing state contracts in Turkey using a staggered Difference-in-Differences design, this study finds that appointed mayors utilize competitive auctions nearly half as often as elected mayors, preferring noncompetitive procedures instead. This leads to a 24% increase in contract prices and a 40% reduction in value for money, equating to a 6% waste in overall procurement spending. These results, robust to various tests, underscore the critical link between local accountability, democracy, and economic efficiency.

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1 Introduction

Across the globe, an erosion of democratic values and institutions has marked the recent past. Regimes with authoritarian tendencies, often motivated by desires to curb dissent or enhance resource extraction, weaponize legal systems to repress their political dissidents both at the national and subnational levels (Varol, 2014; Dixon and Landau, 2021). A striking manifestation of this trend is the escalating efforts by central governments to remove locally elected officials, replacing them with centrally appointed representatives, referred to as *authoritarian* or *central takeover*.[1] However, despite the pervasive global trend towards autocratization (Lührmann and Lindberg, 2019) and its local manifestations, we lack a good understanding of how authoritarian agendas affect local jurisdictions.

This paper investigates how authoritarian takeovers of local jurisdictions affect the rule of law and economic efficiency at the local level. We inquire the consequences of such takeovers within the context of public procurement, using a novel administrative dataset covering the universe of state contracts distributed in Turkey in 2014-19.[2] Focusing on contract awarding methods, we first document how centrally appointed and elected officials exploit legal provisions in public procurement. We then quantify the economic cost of such malpractices and assess the resulting economic inefficiencies. Finally, we delve into the potential mechanisms that may explain the differences between outcomes attained under appointed and elected officials, including the removal of local accountability and the potential coordination benefits arising from a more centralized governance structure.

The authoritarian takeovers of local governments, facilitated by the central appointment of local officials, give rise to two economic forces that can significantly impact economic outcomes at the local level, which are likely to work in opposite directions. First, central takeovers modify the incentive structures within local governments, leading to significant implications for policy outcomes across various domains ranging from public service delivery and municipal grants to sentencing decisions of judges (Lim, 2013; Martinez-Bravo, 2014; Hessami, 2018). In particular, they eliminate the downward accountability of local officials to the local residents. Instead, they establish upward accountability towards the central ruler as the appointed officials' careers hinge on their relationships with the central ruler who holds the power to appoint, promote, and dismiss them (Toral, 2022). Central takeovers,

[1] Prominent instances of central authorities seeking dominance over local jurisdictions are evident in China (Shen and Tian, 2020; Martinez-Bravo et al., 2022), Vietnam (Malesky et al., 2014), Russia (Beazer and Reuter, 2022; Gasparyan, 2022), and Turkey (Tutkal, 2022), to name a few.

[2] According to the World Bank, public procurement accounted for 12% of the global GDP in 2019 (Bosio et al., 2022) and has a significant impact on private sector development, economic efficiency, and social welfare (Ferraz et al., 2015). As an economic activity through which large sums of public funds flow into private hands, it is also particularly vulnerable to corruption through the diversion of funds by public officials (see, e.g., Di Tella and Schargrodsky, 2003; Olken, 2007; Ferraz and Finan, 2011; Titl and Geys, 2019; Baltrunaite, 2020; Colonnelli and Prem, 2022; Baranek and Titl, Forthcoming, among others).

therefore, engender a moral hazard problem where the central ruler may fail to commit to penalizing underperforming or corrupt officials, especially those contributing value to their rule (Myerson, 2021; Fang et al., 2023).

Second, by enhancing the control of the central ruler in the local region, central takeovers may yield economic advantages through coordination benefits resulting from more centralized governance. Specifically, a more centralized governance structure may be better equipped to account for geographical spillovers and leverage economies of scale when providing public goods as coordinating efforts becomes easier in a more centralized regime (Seabright, 1996; Arora et al., 2023).[3] We investigate the plausibility of both mechanisms as well as whether more discretion used by elected and appointed officials leads to better quality or more efficient procurement.

We empirically address these questions within the context of Turkey. With an increasingly authoritarian regime, Turkey has been providing a stream of examples of weaponization of law against dissidents[4], making it an ideal setting to study the consequences of central takeovers. In September 2016, the country enacted an emergency decree amending municipal law, granting the central government the authority to replace elected mayors with appointed ones. Over the subsequent two years, the central government removed 95 elected municipal mayors (out of 254 in the region) and appointed trustee mayors in their stead. Appointed trustee mayors were all mid-level bureaucrats in the state apparatus; they were governors/vice-governors of the same district/province as the municipality. These governors then serve as mayors in the affected municipalities until the next elections.

Using geographic variation across municipalities and staggered timing of trustee mayor appointments, we estimate a Difference-in-Differences (DiD) effect of central takeovers on public procurement practices and outcomes. Our analysis is based on a comparison of centrally appointed mayors with the elected ones in the same region. More specifically, we compare the state contracts granted by elected mayors with those granted by appointed trustee mayors in terms of *law abuse* and *contract terms*, the latter including winning prices and value for money.

Our main outcomes measure the frequency of law abuse –public officials using legal provisions beyond their intended scope. We first measure it by the unjustified use of the *unforeseen event* clause.[5] The use of this clause is only justified during catastrophic events that could not be foreseen by the procuring entity –such as natural disasters and pandemics– and that

[3] A substantial body of theoretical and empirical work investigates the pros and cons of centralized governance. For theoretical contributions, refer to Seabright (1996), Bardhan and Mookherjee (2000), Lockwood (2002), Besley and Coate (2003), Bardhan and Mookherjee (2006), and Myerson (2021). For empirical studies, see Fisman and Gatti (2002a), Fisman and Gatti (2002b), Enikolopov and Zhuravskaya (2007), Mansuri and Rao (2012), Faguet (2014), Beazer (2015), and Cloutier (2017).

[4] See Amnesty International (2021) and Barkey and Cook (2020) for other instances.

[5] A typical clause in procurement regulations intended to deal with cases of extreme urgency.

require immediate handling of the procurement due to a risk to lives or property. This clause, when invoked, allows the procuring agency to use the more discretionary *negotiation* procedure that gives them the power to choose who to invite to bid on the contract without the necessity to publicize the contract notice. The unforeseen events clause, when used in an unjustified manner, serves as a loophole to avoid the more demanding legal requirements of the *sealed-bid auction*.[6] Our second outcome is the use of the *threshold* clause.[7] This clause is intended to facilitate a fast-track procedure with the negotiation method for small purchases under a threshold. However, officials can alter the contracts to stay below the threshold and gain more discretion in contract awarding. We investigate both how often public officials invoke this clause and whether it entails cost manipulation when they do so.

Our analyses reveal that the central takeover of local governments deteriorates the rule of law in public procurement. We observe that centrally appointed trustee mayors invoke the unforeseen event clause 23 percentage points (pp) more frequently than their elected counterparts –a surge amounting to three times the level of elected mayors. Similarly, the share of procurement spending associated with the unforeseen event clause is significantly higher (28 pp) among trustee mayors than among elected mayors. These adverse effects come at the expense of (more competitive) sealed-bid auctions. Under trustee mayors, the use of sealed-bid auctions and the share of spending associated with sealed-bid auctions decrease by, respectively, 33 and 28 pp, indicating a 50% reduction compared to levels observed under elected mayors. Furthermore, the use of the unforeseen event clause by trustee mayors pushes contract prices higher by 24% and reduces the rebate –or the value for money– by a substantial 40%. These effects translate into an economic waste of $100 million –equivalent to 6% of the total procurement spending in the affected municipalities– that could have been saved had the trustee mayors invoked the unforeseen event clause only in cases permitted under the law.

Regarding the use of the threshold clause, elected and appointed mayors do not differ statistically. A closer look into the estimated cost distribution of contracts reveals that both types of mayors engage in substantial cost manipulation at comparable levels to attain more discretion. We additionally show that contractors winning contracts with greater discretion, either via the unforeseen event or threshold clause, have a Herfindahl-Hirschman Index (HHI) nearly three times higher than those obtained through sealed-bid auctions. This suggests a pronounced recurrence of specific contractors, leading to a contraction in competition.[8]

[6]Sealed-bid auction is regarded as the most competitive auction method in public procurement since any potential contractor can compete in the contract awarding process, and a contract notice has to be published in advance.

[7]Another typical clause in procurement regulations allowing the use of the more discretionary negotiation method in contract awarding when the value of the purchase is below a certain threshold.

[8]The Herfindahl-Hirschman Index for a set of contracts is calculated as the squared sum of the shares of individual contractors.

We next explore the potential mechanisms that might explain the observed disparities between elected and trustee mayors. The adverse effects of central takeovers as reported in our findings resonate well with the literature on electoral accountability and suggest the removal of local accountability as the effective mechanism.[9] Furthermore, we observe that elected mayors are less prone to engaging in the types of law abuses easily detectable by voters, such as the exploitation of the unforeseen event clause. Conversely, no such difference emerges in the case of less detectable types of law abuse –such as the cost manipulation in the case of much smaller contracts that are less likely to attract attention from the public– , giving further support to the local accountability mechanism. We also do not find any change in the composition of spending due to central takeovers, casting doubt on the efficacy of more centralized governance in bringing about coordination benefits. Finally, we present suggestive evidence that the increased discretion used by trustee mayors does not translate into improved quality of procurement. We discuss these mechanisms in detail in Section 5.3.

We test the robustness of our results to several alternative specifications, including different versions of the outcome; alternative assumptions such as conditional and unconditional parallel trends; inclusion of controls; and an alternative identification strategy (Regression Discontinuity in Time, RDiT). We also test and reject several alternative mechanisms, including more natural disasters in trustee-appointed municipalities, violence history of the region, and the adverse selection of governors as trustee mayors.

This paper relates to two distinct literatures. First, although there has been an active literature on authoritarianism, systematic evidence on the weaponization of law and its subnational manifestations are still scant (Varol, 2014; Dixon and Landau, 2021; Beazer and Reuter, 2022; Gasparyan, 2022; Martinez-Bravo et al., 2022). Our central contribution is thus to provide causal evidence for the effects of authoritarian agenda in the local. We provide a thorough analysis of local authoritarian takeovers by focusing on an amendment of municipal law allowing the central government to remove elected officials and replace them with centrally appointed representatives.

Crucially, in many scenarios involving central takeovers, myriad effects manifest through diverse channels, making it challenging to disentangle them (Treisman, 2007).[10] Our setting is unique in the sense that takeovers did not change the fiscal or administrative purview of

[9] See, e.g., Barro (1973), Ferejohn (1986), Besley and Case (1995), Persson and Tabellini (2002), List and Sturm (2006), De Janvry et al. (2008), Ferraz and Finan (2011), Ashworth (2012), Lim (2013), Hessami (2018), Aruoba et al. (2019), Lopes da Fonseca (2020), Finan and Mazzocco (2021), and Mehmood (2022), for studies on electoral accountability.

[10] For instance, in numerous centralization or decentralization contexts, shifts in administrative, fiscal, and political authority tend to occur simultaneously. In Vietnam, for example, the central authority abolished the District People's Councils (DPCs), an elected body with administrative, political, and fiscal authority in 2009. Most of these powers and responsibilities were transferred upward to Provincial People's Committees, executive bodies at a higher administrative unit (Malesky et al., 2014).

the mayors; appointed mayors had the same powers as the elected ones. This streamlined scenario reduces the array of potential mechanisms to a select few, allowing for a comprehensive investigation of each.[11] We pinpoint local accountability as the pivotal mechanism in effect. By contrast, we show that the potential economic benefits of heightened centralization did not accrue in our setting, a topic that has been a subject of contention in the centralization literature (Seabright, 1996; Myerson, 2021).

Second, our findings regarding discretion in contract awarding tie our paper into an extensive literature on the role of politician discretion (Palguta and Pertold, 2017; Coviello et al., 2018; Duflo et al., 2018; Tulli, 2019; Decarolis et al., 2020; Baltrunaite et al., 2021; Bandiera et al., 2021; Carril et al., 2021; Hanspach, 2023; Szucs, 2023). Drawing on well-identified causal estimates from several settings, this literature seeks to understand whether discretion improves policy outcomes or strengthens rent-seeking behavior. However, these studies exclusively focus on a specific type of malpractice, namely cost manipulation through the threshold clause. This focus effectively limits the study samples to small purchases under a certain threshold. We expand the scope and analytical toolkit of this literature by introducing a novel measure of law abuse based on the unforeseen event clause, which can be used for all kinds of contracts regardless of the value of the procurement.[12] We demonstrate that this clause provides mayors with significant leeway to exploit their power, particularly in contexts with weak local accountability mechanisms. This suggests that the existing literature may have underestimated the extent of law abuse in procurement practices. Our second main contribution addresses this gap in the literature.

The remainder of the paper is organized as follows. Section 2 provides some background information on the empirical setting, public procurement in Turkey, and the legal framework that regulates it. Section 3 describes the data sources and variables used in the empirical analysis. Section 4 presents the empirical strategy. Section 5 presents the empirical results, robustness checks, and alternative mechanisms, and also explores underlying mechanisms. Section 6 concludes with some policy implications.

[11] Our analysis compares trustee mayors appointed by President Erdoğan's government with elected mayors from President Erdoğan's *Justice and Development* Party (AKP hereafter). The restriction of elected mayors to elected AKP mayors –rather than including opposition mayors, too– ensures that we do not pick up any effect of typical horizontal accountability mechanisms such as judicial or media investigation. We relax this restriction only in certain analyses when a comparison of trustee and opposition mayors is of interest *per se*.

[12] The unforeseen event clause we investigate is not specific to the public procurement regulation of Turkey. Similar versions can be found in the procurement regulations of the EU countries, the UK, the US, etc. See, for example, Article 32(c) that regulates the use of the negotiated procedure without prior call for competition for reasons of extreme urgency in the EU Procurement Directive (European Parliament and Council of the European Union, 2014).

2 Empirical Setting

In this section, we discuss the political background, the characteristics of trustee mayors, and the public procurement regulations in Turkey.

2.1 Political Background and Trustee Appointments

Dismissal of the elected mayors and the appointment of the trustee mayors were possible thanks to the state of emergency declared in the wake of the failed *coup d'état* attempt of July 15^{th}, 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 known to be 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 predominantly Kurdish provinces and demonstrated significant opposition to Erdoğan's rule, came under attack with the emergency decree-law no. 674 of 1 September 2016.[13] This decree amended the municipal law, allowing the government to replace elected mayors, deputy mayors, or council members with trustees appointed by the state authorities if there were charges against them about offenses of aiding and abetting terrorism and terrorist organizations.[14]

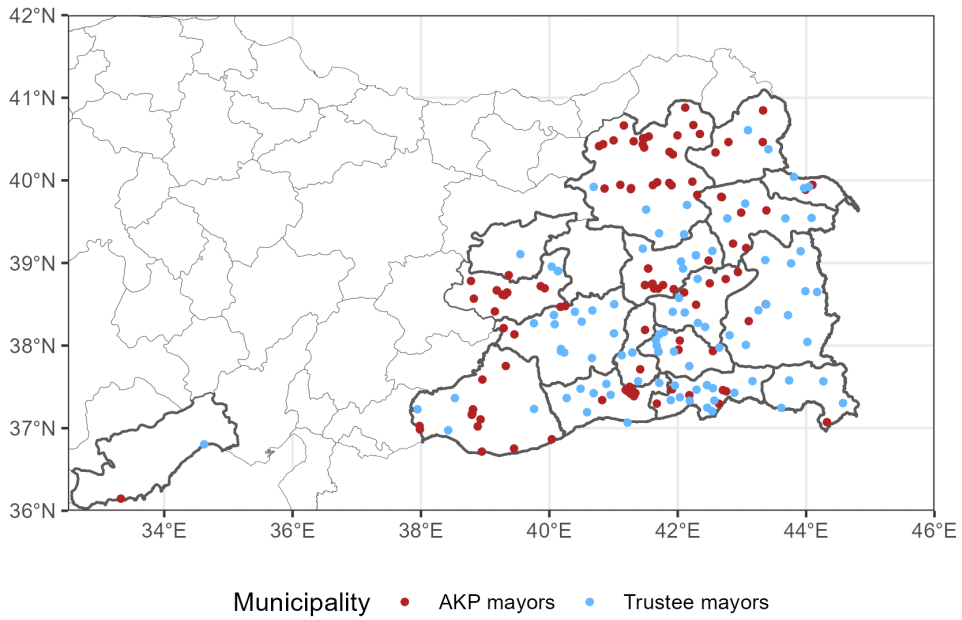
The replacement of the elected mayors started on September 11^{th}, 2016, with 24 mayors being sacked and continued throughout the state of emergency, removing 95 elected mayors out of 102 in two years (see the full list of trustee appointments in Appendix C). Figure 1 shows the geographical distribution of the mayoral offices taken over by trustee mayors and those held by elected (AKP) mayors. Our region of interest hosts 254 municipalities located within 168 districts in 18 provinces. Out of the 254 municipalities in the pre-trustee appointments era, 102 (%40) were held by the pro-Kurdish party DBP and 96 (%38) by AKP.[15]

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

[14] 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).

[15] Out of 95 trustee-appointed DBP municipalities, we drop four of them as they did not grant any contracts during our period of interest.

Figure 1: Municipal offices held by trustee and elected (AKP) mayors



Notes: The map shows the geographical locations of the mayoral offices held by the elected AKP mayors (Red Dots) and the centrally appointed trustee mayors (Blue Dots). The borders shown correspond to provincial borders.

Table 1 reports the characteristics of AKP –*control*– and trustee-appointed DBP –*treatment*– municipalities prior to trustee appointments. Although the DBP municipalities tend to be slightly more populous on average and host more business enterprises, these differences are not statistically significant. On the other hand, while AKP vote share in 2014 was higher in AKP municipalities and DBP vote share in DBP municipalities as expected, AKP still had significant support in municipalities held by DBP mayors (%31).

Table 1: Municipal characteristics

Variable	Control mean	Treatment mean	Difference p-value
Population	85366.55	98367.22	0.62
Number of enterprises	3757.07	4436.89	0.56
Nightlight	-0.23	-0.22	0.27
AKP vote share	0.48	0.31	0.00
DBP vote share	0.16	0.52	0.00
No. of municipalities	96	91	

Notes: The table reports the municipality characteristics separately for the control and treatment groups, which consists of respectively, municipalities held by DBP (i.e., later on trustee-receiving municipalities) and municipalities held by AKP. The means of variables are calculated over municipalities across two years before the treatment (2014 and 2015). Nightlight variable is normalized in the sample of districts of Turkey. AKP vote share and DBP vote share indicates the votes shares of these parties in the 2014 local elections. Difference p-value column reports the p-values from t-tests.

Finally, our region of interest, Southeast Turkey, has experienced armed conflict between the Turkish state and Kurdish militia forces since the 1980s (Ozsoy, 2013; Yarkin et al., 2015; Yegen, 2016). The frequency of armed conflict events fluctuates over time, with periods of escalation followed by more peaceful intervals. The years of trustee appointments, 2016-18, was one such quiet episode. The trustee appointments were merely based on alleged offenses of aiding or abetting terrorism before any trials or court decisions were made (Tepe and Alemdaroğlu, 2021). Instead, they have been widely perceived as manifestations of AKP's strategies to exert control over local regions, suppress opposition, and strengthen its hold on power (Whiting and Kaya, 2021; Tutkal, 2022). In support of this, OHCHR (2017) reports that "[i]n most cases, the 'trustees' were 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 "[t]o 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), to no avail.

2.2 Getting to Know the Trustees: Governors in Turkish Central Administration

In Turkey, the local public administrative system functions through a dual structure: locally elected municipal authorities handle the local infrastructure and services like maintenance of urban roads, construction zoning, and water facilitation, while the appointed governors represent the central government at the provincial and district levels[16] with limited fiscal authority (Tan, 2020). The majority of the trustees in our sample are the governors of the same district in which they are appointed as trustee mayors, while the rest are either provincial governors (replacing the mayors of metropolitan municipalities) or their deputies. Provincial and district governors, known as *vali* and *kaymakam* in Turkish, respectively, act as intermediaries between the central authority and localities. Their responsibilities extend to various provincial and district administrative functions, including supervising local branches of central ministries and government agencies and ensuring coordination among state institutions in their areas. However, their direct obligations to the local population compared to elected mayors are limited to order and security at the local level (Çapar, 2015).

Governors are career bureaucrats, appointed for life through a centrally administered

[16]Note that municipalities are nested in districts since the former only operates in urban areas. Districts are nested in provinces. For certain major provinces, municipal boundaries overlap with district boundaries. These major provinces are known as "metropolitan provinces." These metropolitan provinces also have metropolitan municipalities whose borders overlap with the respective province borders.

selection process overseen by the Ministry of Interior[17]. As long as they are deemed successful at their posts, they move up on a predetermined scale of district types, rotating every two or three years. Starting from the job interview stage, the governors are annually evaluated by their superiors within the Ministry of Interior throughout their career routes. These evaluations would form the basis of their promotions along the ranks, in which the final decision is the President's. As such, the profession is highly hierarchical, and career prospects are dependent on the governor's ability to appease their superiors, including the central government (Üstüner and Yavuz, 2022).

To sum up, both the nature of their responsibilities and career incentives suggest that the governors have limited accountability toward the local populations. In contrast, the elected mayors almost always are "home-grown" and have to be in good relations with the local elites and voters. On the other hand, they are accountable to the higher echelons of their parties. The candidates for a mayoral position are determined by the central executive committee of the respective party (Joppien, 2018). Even the elected and seemingly successful mayors have to be on good terms with the party executives. One recent glaring example in this vein was when Erdoğan forced the resignations of AKP mayors in six major cities, including those of İstanbul and Ankara, in 2017. Most of these mayors were deemed to be popular among the voters (Gall, 2017).

2.3 Public Procurement Regulations in Turkey

The current form of the public procurement law in Turkey was legislated in 2002, just before AKP came to power.[18] As it was formed in line with the EU Procurement Directives, the law establishes the *sealed-bid* auction, i.e. the open procedure, and the *negotiation* method, i.e., the restricted procedure, as the main forms of procurement. Article 21 of the Public Procurement Law (2002) states that the negotiation procedure can only be used under certain conditions[19], two of which are the unforeseen events clause (Article 21b) and the threshold

[17]Law on the Officers of Ministry of the Interior, 1930. Available here: https://www.mevzuat.gov.tr/MevzuatMetin/1.3.1700.pdf

[18]From its first day in government, AKP resisted both the new public procurement law and the newly established independent regulatory agency, the Public Procurement Authority (PPA), albeit with little success initially (Ercan and Oguz, 2006). However, in the years to come, successive AKP governments redesigned the procurement framework according to their needs. While the PPA lost its independence and the ability to investigate possible corruption cases in the absence of formal complaints, hundreds of amendments to the law have been made since as early as July 2003, generally bending the law to include more exceptions and more discretion to the procuring agencies (Gürakar, 2016).

[19]To summarize, these conditions are: a) no bids received for an open/restricted procedure; b) unforeseen event clause; c) defense and security contracts; d) contracts that require a research and development process; e) contracts that have complex technical and financial characteristics; f) threshold clause. 96% of the contracts that are awarded via the negotiation method in our sample invokes either the unforeseen event or the threshold clause, which are our subjects of interest in this paper.

clause (Article 21f). When the contracting administration uses the negotiation procedure for procurement via these two articles, it has the discretion to invite only select companies without the need to publicize the tender notice. While there is no specific rule on how to determine who will be invited, the procurement document can only be acquired by the invited parties. The law also rules out any objection to the outcome of this procedure by a party that was not invited in the first place (Demircioğlu, 2014; Yıldırım, 2018).

There is anecdotal evidence of law abuse as early as 2008 (Gürakar and Meyersson, 2016). Demircioğlu (2014) describes how administrations in Turkey use the negotiation procedure in the law in an unjustified manner and deems this as a clear violation of the law. He also argues such tender irregularities develop into corruption in procurement. Yıldırım (2018) also provides anecdotal evidence of this abuse from the more recent period.

Before presenting our results on how the central appointment of trustee mayors changed procurement practices and outcomes in impacted municipalities, we present our data and empirical strategy.

3 Data

We use a novel administrative dataset covering the universe of state contracts distributed in Turkey between 2011 and 2019. It provides detailed information at the contract level, including but not limited to contract awarding method; type of the procurement (*construction, goods,* or, *services*); industry code of the procurement; estimated cost of the procurement, price of the contract, and rebate value; name, district, and province of the procuring state agency; name of the contractor; and contract date. From this dataset, we use the contracts granted in the provinces where affected municipalities are located between the two local elections in 2014 and 2019.[20]

We complement this contract-level dataset first with information on the trustee mayor appointments. These include the name of the municipality and appointment date of the trustees ranging between September 11^{th}, 2016 and August 29^{th}, 2018. Second, we complement it with administrative data from the Turkish Statistical Institute (*TURKSTAT*) on the number of business enterprises and population at the municipality level. Finally, we add nightlight data at the district level as a proxy for the level of economic development.[21]

Outcomes.—We focus on two sets of outcomes. Our first set of outcomes concerns the contract awarding method, i.e., whether the contract is awarded through the unforeseen

[20]The data is publicly available for individual queries on the webpage of the Turkish Public Procurement Authority (*Kamu İhale Kurumu*). The data set used in this paper is constructed by authors using web scraping tools.

[21]Since there is no shapefile at the municipality level in Turkey, we instead use district shapefiles to calculate nightlight intensity in each district.

event clause, threshold clause, or a sealed-bid auction. Using this information, we construct the following two outcome variables at the municipality level: i) the monthly share of each contract awarding method, and ii) the monthly share of spending with each contract awarding method based on contract prices.[22]

Our second set of outcomes measures the economic performance of mayors in public procurement based on contract terms. We specifically focus on *contract price*, *rebate*, and *estimated cost* of the procurement. *Contract price* indicates what the procuring entity pays to the contractor, i.e., the winning price. *Estimated cost* is calculated by the procuring entity before the contract awarding process based on the specifics of the purchase. *Rebate*, i.e. value for money, is the discount rate the procuring entity attains in contract awarding and is calculated as follows:

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

Higher rebate values are more favorable in terms of public interest as they imply that the procuring entity pays relatively little compared to the estimated cost of the purchase.

Main Variable of Interest.—We are specifically interested in how central takeovers affect the public procurement practices in local governments. Accordingly, our main explanatory variable is a binary indicator of whether a contract is awarded by an appointed trustee mayor as opposed to an elected mayor. We formally define it as follows:

$$\text{Trustee}_i = \begin{cases} 1 & \text{if contract } i \text{ is granted by a trustee mayor} \\ 0 & \text{otherwise.} \end{cases}$$

Control Variables.– In certain specifications, we control for the number of business enterprises and population level at the municipality level, and the level of nightlight at the district level to proxy the economic development level of the area. We also include year, province, procurement type, and industry fixed effects whenever appropriate.

4 Empirical Strategy

To estimate the effect of central takeovers on law abuse in local governments, our analysis makes a comparison of elected mayors to appointed trustee mayors in their use of *unforeseen event* clause, *threshold* clause, and *sealed-bid auctions*. More specifically, we estimate how much elected and trustee mayors differ in: i) monthly share of contracts awarded with each

[22]The sealed-bid auctions are the most common contract awarding method in our sample. 65% of all contracts are awarded through sealed-bid auctions. The remainder is awarded with the (more discretionary) negotiation method justified through *unforeseen event* or *threshold* clauses.

contract awarding method, and ii) monthly share of spending with each contract awarding method based on contract prices.

We use a staggered Difference-in-Differences (DiD) design to causally estimate these differences. Our DiD setting comprises multiple time periods (60 months) with the treatment group including 96 municipalities that have been appointed trustees at different points in time –in the span of two years– and remain treated until the end of our analysis period. The never-treated control group consists of 95 municipalities with an elected AKP mayor in the provinces where the trustee-appointed municipalities are located.[23]

Using this DiD setting and the estimation method by Callaway and Sant'Anna (2021), we first estimate the group-time average treatment effects where groups are defined at the municipality level based on when they first received the trustee mayor. We then aggregate these group-time average treatment effects into an overall treatment effect. In all estimations, we cluster the standard errors at the municipality level. We report the overall treatment effects from these estimations in Section 5.

Our main identification assumption for the causal interpretation of the estimated effects is that the treatment group would have followed a similar trend to that of the control group in the absence of trustee appointments, i.e., the *parallel trends* assumption.[24] Following Callaway and Sant'Anna (2021), we test the plausibility of parallel trends assumption by estimating dynamic treatment effects, i.e., treatment effects based on the length of exposure to the treatment. This method allows us to test both the conditional and unconditional parallel trends, and construct confidence intervals that are robust to potential multiple hypothesis testing problems. In Section 5, we report the dynamic effects and plausibility of the parallel trends assumption.

After estimating the overall treatment effect and the dynamic effects, we proceed to test the robustness of these results in Section 5.1.1. We first show that our results are similar under *unconditional parallel trends* and *parallel trends conditional on controls* assumptions[25] and to the inclusion of controls. We also show that our results remain the same when we use different versions of the outcome and an alternative specification of the control group.

Finally, we show that our results also replicate with a regression discontinuity in time (RDiT) design. This analysis uses a different sample than the DiD estimations. Specifically, we compare trustee mayors with elected DBP mayors whom they replaced using an RDiT

[23]This unique setting enables us to compare elected and trustee mayors who have the same powers and who are aligned with the same ruling elite –*Erdoğan's regime*– net of horizontal accountability mechanisms such as judicial or media investigation.

[24]Although the parallel trends assumption is not testable due to lack of the counterfactual, the standard practice is to run a pre-test of it (Callaway and Sant'Anna, 2021). This implies testing whether treatment and control groups follow a similar trend before the treatment.

[25]The estimation method developed by Callaway and Sant'Anna (2021) is able to attain unbiased estimates under the assumptions of both unconditional parallel trends and parallel trends conditional on covariates.

design and show that the results are remarkably similar to those from DiD estimations.

5 Results

In this section, we first present our main analysis and results. We then provide our results regarding the economic cost of central takeovers in Section 5.2. Finally, in Section 5.3, we probe the underlying mechanisms that help explain our results.

5.1 Main Analysis

We start by estimating the group-time average treatment effects on i) monthly share of contracts awarded with each contract awarding method and ii) monthly share of spending with each contract awarding method based on contract prices, using a staggered Difference-in-Differences (DiD) design (Callaway and Sant'Anna, 2021).

To investigate the dynamic effects and assess the plausibility of parallel trends assumption, we first aggregate group-time average treatment effects to dynamic effects based on the length of exposure to the treatment. Figures 2 and 3 plot these dynamic effects by the length of exposure to the treatment, i.e., *relative month*. According to Figure 2, before the trustee appointments, treatment and control groups do not significantly differ from each other in the share of contracts awarded with the unforeseen event clause, giving credibility to our DiD design. In contrast, after trustee appointments, the use of unforeseen event clause by trustee-appointed municipalities start to increase and this effect persists for almost 2 years.

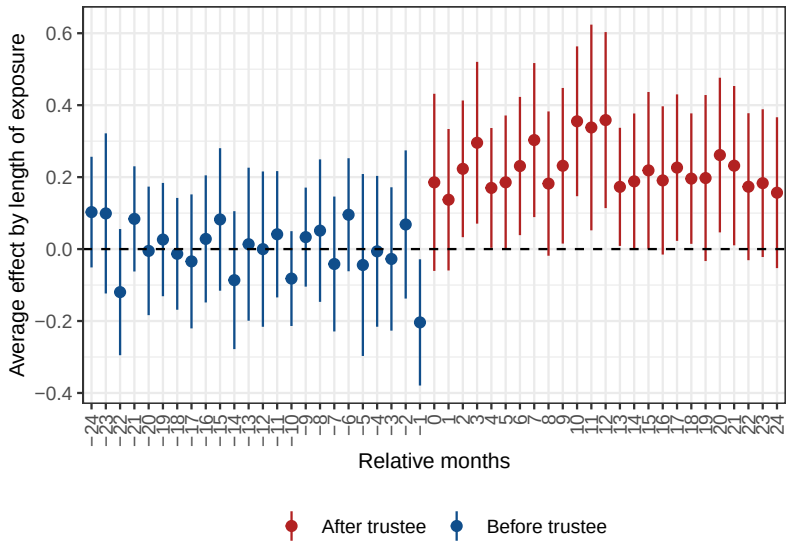
Figure 3 reveals a consistent reverse pattern for the share of contracts awarded with sealed-bid auctions. Specifically, the treatment and control municipalities do not differ from each other before trustee appointments. After central takeovers, however; the share of contracts awarded by sealed-bid auction declines significantly for the trustee-appointed municipalities. Similarly, the effects persist for almost 2 years. Figure A.1 in the Appendix reports the dynamic effects for the threshold clause, for which we do not find any difference between the treatment and control municipalities either before or after the treatment.[26] Note that the confidence intervals around the dynamic effects are robust to multiple hypothesis testing both in conditional and unconditional parallel trends assumption checks.

We then aggregate these dynamic effects into overall treatment effects by taking the weighted average of group-time treatment effects.[27] Table 2 presents the results regarding our first outcome, *monthly share of contracts* awarded with each contract awarding method,

[26] We report the tests of both conditional –with controls– and unconditional –without controls– parallel trends for our other outcomes in the Appendix A.1 and A.2. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level.

[27] Weights are chosen proportional to the group sizes.

Figure 2: Dynamic effects: share of contracts awarded with the unforeseen event clause



Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly share of contracts awarded with the unforeseen event clause. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

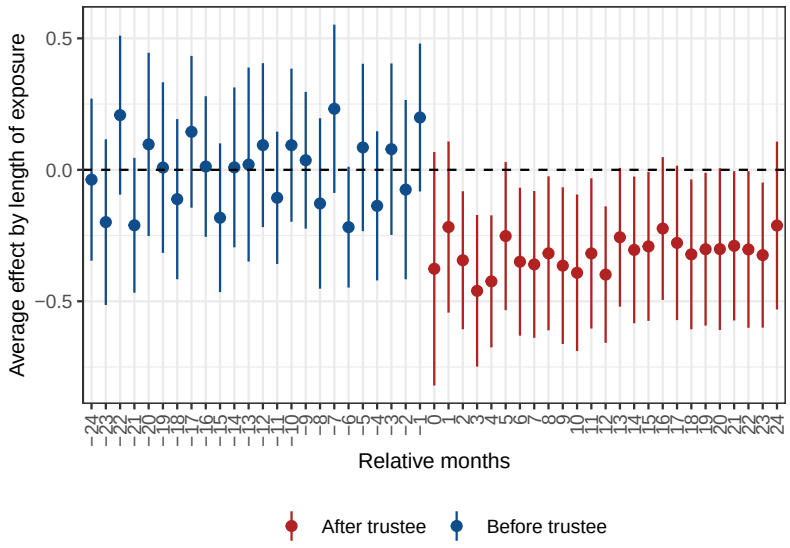
using two models, with and without controls. The first two models report the share of contracts awarded with the unforeseen event clause, which is normally reserved for situations of extreme urgency and allows procuring entity to exercise more discretion in contract awarding. Trustee mayors use this clause significantly and substantially more than their elected AKP counterparts. Specifically, trustee mayors invoke this clause 23 percentage points more than the elected mayors, which is a substantial effect considering the control group mean (0.12).

The increase in the share of contracts awarded with the unforeseen event clause comes at the expense of (more competitive) sealed-bid auctions. Trustee mayors award much fewer contracts with the competitive sealed-bid auctions compared to the elected mayors. Columns 3 and 4 in Table 2 show this clearly: the trustee mayors award contracts through sealed-bid auctions 33 percentage points less than the elected mayors, whose mean share of contracts awarded with sealed-bid auctions is 0.61.

We next report on how much elected and trustee mayors differ in their use of the threshold clause. This clause allows procuring entities to bypass the sealed-bid auction and use the more discretionary negotiation method for small purchases below a certain threshold. Columns 5 and 6 in Table 2 show that trustee mayors are statistically not different from the elected mayors in their use of the threshold clause of the procurement law.

The absence of such difference does not necessarily mean that the officials do not abuse

Figure 3: Dynamic effects: share of contracts awarded with sealed-bid auction



Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly share of contracts awarded with sealed-bid auction. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

this clause. To further analyze the case of the threshold clause, we focus on cost manipulation practices, i.e., artificial manipulation of the estimated cost to keep it just below the threshold value. To test whether public officials have been engaging in such cost manipulation, we first normalize the estimated cost of the contracts by dividing it by the corresponding threshold value.[28]

Figure 4 plots the density distribution of the contracts granted by elected and trustee mayors. The dashed gray line corresponds to the mass point where the estimated cost of the contracts equals the threshold value. Figure 4 shows clear evidence of bunching just before the threshold values, both by elected and trustee mayors. In sum, both types of mayors engage in substantial cost manipulation to gain more discretion in contract awarding.[29]

So far, we have reported treatment effects on the share of contracts granted with each awarding method. However, one can argue that the changes in the frequency of contract awarding methods are not consequential *per se* unless they are also accompanied by respective changes in the amount of spending. Our next outcome serves this purpose. Accordingly, we first show the effect of trustee appointments on the *monthly share of spending* with each

[28]The threshold values are annually decided by the Public Procurement Authority in Turkey. We divide the estimated cost of each contract by the threshold value announced for the same year.

[29]We also show that trustee mayors are similar to elected DBP mayors –whom they replaced– in terms of cost manipulation. See Figure A.5 in the Appendix.

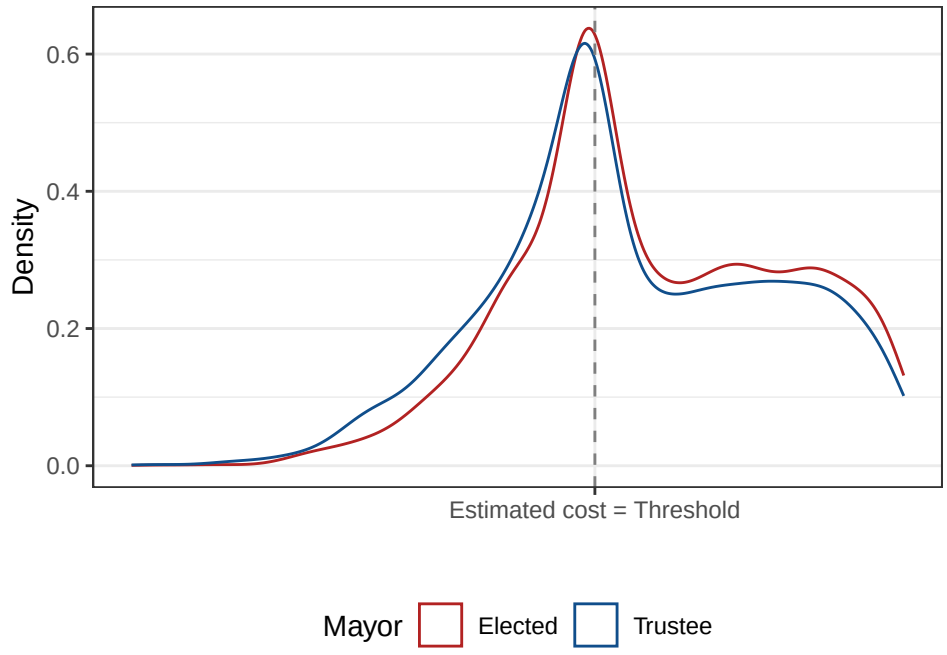
Table 2: DiD estimates: monthly share of contract awarding methods

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.226	0.234	−0.311	−0.328	0.036	0.041
	[0.145, 0.308]	[0.140, 0.328]	[−0.437, −0.185]	[−0.460, −0.195]	[−0.086, 0.158]	[−0.078, 0.161]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.12	0.12	0.61	0.61	0.26	0.26
Num.Obs.	4731	4731	4731	4731	4731	4731

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

contract awarding method based on contract prices.

Figure 4: Cost manipulation for more discretion: elected vs. trustee mayors



Notes: The figure plots the density distributions of estimated cost of contracts under elected (AKP) and trustee mayors. The dashed line corresponds to the threshold value below which the procuring authority attains more discretion in contract awarding process.

Table 3 reports the results of this analysis, which are in line with our main results. Under trustee mayors, the share of spending with unforeseen event clause is 28 percentage points higher than that of the elected mayors. Therefore, we observe a sizable difference that is twice the share of spending in the control group. This increase in spending with the unforeseen

event clause is equivalent to the decrease in spending with the sealed-bid auctions.

5.1.1 Robustness Tests

We conduct a series of analyses to show the robustness of our results to alternative versions of the outcome, alternative assumptions, and a different identification strategy. First, as detailed in the previous section, we report evidence for the plausibility of both conditional and unconditional parallel trends assumption. Accordingly, our DiD estimations in Tables 2 and 3 report estimates that are consistent with each other from models with and without control variables, which we refer to as our main analysis. Second, we repeat the same type of analysis with two different versions of our outcome variables, as also described in the previous section. The results indicate that central trustee appointments have quantitatively and qualitatively similar effects on each outcome.

Table 3: DiD estimates: monthly share of spending based on contract prices

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.269	0.282	−0.267	−0.277	−0.002	−0.004
	[0.186, 0.352]	[0.189, 0.375]	[−0.408, −0.126]	[−0.424, −0.131]	[−0.131, 0.128]	[−0.127, 0.119]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.13	0.13	0.65	0.65	0.22	0.22
Num.Obs.	4681	4681	4681	4681	4681	4681

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of spending with the respective contract awarding method and calculated based on contract prices. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

Third, we test the robustness of our results to the specification of the control group. Our main analysis uses a control group of municipalities that have never been treated, i.e., that have never been appointed a trustee mayor. Alternatively, we construct a control group of not-yet-treated municipalities. Doing so includes the pre-treatment periods of trustee-appointed municipalities in the control group. As shown in Appendix A.4, our results remain both quantitatively and qualitatively similar.

Finally, we use an entirely different empirical strategy and estimation technique. We compare trustee mayors with the mayors whom they replaced (elected DBP mayors) in a before/after-trustee comparison using a Regression Discontinuity in Time (RDiT) design (Hausman and Rapson, 2018). Our running variable in this setting is the number of days relative to the trustee appointment date with the cut-off value set as 0. Accordingly; treated units fall to the right of the cut-off, whereas non-treated units fall to the left.

For estimation, we follow Calonico et al. (2015) and use a non-parametric approach with a triangular kernel and allow for different bandwidths at different sides of the cut-off. On each side, we use optimal bandwidths that minimize the mean-squared error (MSE). However, we also experiment with manually chosen bandwidths in the Appendix to show that results are not driven by a specific bandwidth choice (see Table A.5).

We present the results from our RDiT analyses in Table 4.[30] This analysis compares the state contracts granted by trustee mayors and elected DBP mayors whom they replaced. Remarkably, the bias-corrected robust RDiT estimates show very similar results to our main DiD estimates, proving the robustness of our results to an entirely different identification strategy. In particular, trustees are more likely to use the unforeseen event clause compared to the elected DBP mayors by around 23-24%. Similarly, they are less likely to distribute state contracts with sealed-bid auctions by around 33-40% depending on the model specification. In line with the main results, we do not find a difference in the use of threshold clause.

Table 4: Regression discontinuity in time (RDiT) estimates

	Unforeseen event		Sealed-bid acution		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee mayor	0.233***	0.239***	−0.403***	−0.333***	−0.015	−0.006
	(0.085)	(0.067)	(0.113)	(0.074)	(0.068)	(0.062)
Num.Obs.	7879	7879	7879	7879	7879	7879
Num.Obs.Effective.Left	1214	638	529	527	621	692
Num.Obs.Effective.Right	509	680	438	651	1405	1056
Covariates	No	Yes	No	Yes	No	Yes
Year FE	No	Yes	No	Yes	No	Yes
Province FE	No	Yes	No	Yes	No	Yes
Procurement type FE	No	Yes	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes	No	Yes
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Pre-trustee mean	0.1	0.1	0.74	0.74	0.16	0.16

Notes: The table reports estimates obtained from RDiT estimations using Calonico et al. (2015) with triangular kernel and optimal bandwidths which are allowed to differ between two sides of the cut-off. The dependent variables are binary indicators of whether the contract is awarded with the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. *Industry FE* variable indicates the industry code of the procurement and include 44 levels. Standard errors are clustered at the municipality level. Optimal bandwidths range from 157 to 217 days. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

[30] See Figures A.6, A.7, and A.8 in the Appendix for the regression discontinuity (RD) plots.

5.2 Economic Consequences

Although trustees grant state contracts with more discretion than their elected counterparts by abusing the procurement law, a strand of literature suggests that more discretion might be good for public (See, among others, Coviello et al., 2018; Decarolis et al., 2020). In this section, we analyze whether and how much the documented cases of law abuse and the resulting increased discretion costs to the public. We focus on two outcomes to understand the economic effects of increased discretion: contract price and rebate. The mean rebate value in our sample is 19%, meaning that the public enjoyed 19% discount relative to the estimated cost. The mean contract price is $485,000 (in 2010 dollars).

When we specifically focus on contracts granted by trustee mayors, the mean rebate values are 16% and 24% in contracts granted with the unforeseen event clause and sealed-bid auction, respectively. In other words, the procuring public agency attains significantly less discount when the trustee mayors grant contracts using the unforeseen event clause. Similarly, while the resulting mean contract price for contracts granted with sealed-bid auction is $484,000, it increases to $518,000 when the unforeseen event clause is used, bringing about a 7% increase.

In Table 5, we investigate the economic effects mentioned above in a regression framework. Specifically, we focus on contract price and rebate, and compare how much these outcomes change when the unforeseen event clause is used instead of sealed-bid auctions separately when the contracts are awarded with trustee and elected mayors. Under trustee mayors, the contracts granted with the unforeseen event clause leads to a 9.5 percentage points decrease in rebate compared to the contracts granted with sealed-bid auctions. This translates into a 40% decrease in rebate (compared to sealed-bid auctions). Contract prices, on the other hand, increase by around 24%. These effects translate into an economic magnitude of $100 million (6% of the total spending via procurement in the affected municipalities), which could have been saved had the trustee mayors not abused the unforeseen event clause and granted the contracts with sealed-bid auctions instead.[31]

Under elected mayors, we do not find any price differential between contracts granted with the unforeseen event clause and sealed-bid auctions. We, however, do find that rebates decrease by 8 percentage points when they grant the contract with the unforeseen event clause instead of sealed-bid auctions (translating into a 35% decrease in rebate). Together

[31] These estimated effects regarding the efficiency of the public procurement system do not necessarily imply an increase in total procurement spending in the affected municipalities. The total spending via procurement is a function of no of contracts granted with sealed-bid auctions, unforeseen event clause, and threshold clause as well as mean contract price of each contract awarding method. Indeed, we show Appendix B.5 that the central takeovers do not affect the monthly total procurement spending causally. In Appendix A.16, we provide a detailed breakdown of spending via procurement and no of contracts for each contract awarding method, separately for DBP, trustee, and AKP mayors.

with our main results, these findings suggest that the elected mayors use the unforeseen event clause much less often than the trustee mayors. When they do use it, however; the associated economic cost is smaller.

Table 5: OLS estimates for contract terms: trustee and elected (AKP) samples

	Trustee sample		Elected (AKP) sample	
	Price (log)	Rebate	Price (log)	Rebate
Ref.level: Sealed-bid auction				
Unforeseen events	0.216**	−0.095***	−0.044	−0.081***
	(0.099)	(0.010)	(0.116)	(0.011)
Threshold clause	−0.803***	−0.115***	−0.993***	−0.090***
	(0.058)	(0.013)	(0.071)	(0.012)
Covariates	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Num.Obs.	4322	4312	3581	3567

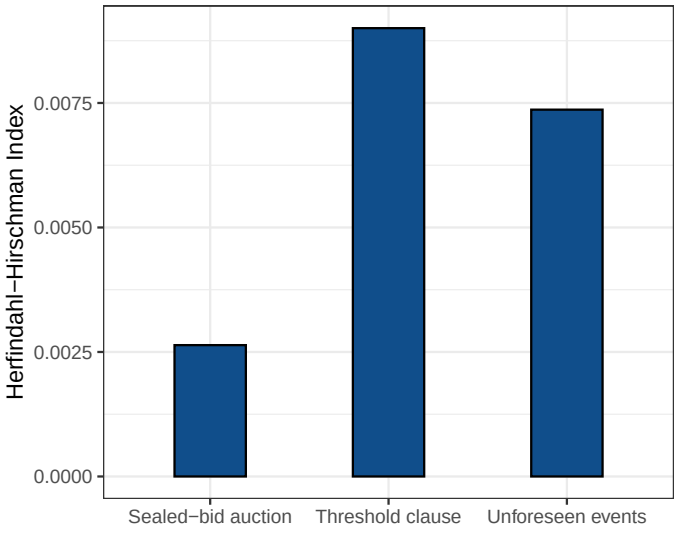
Notes: The table reports results from OLS estimations. The dependent variable are contract price (in TL, in real terms, in log) and rebate. The main explanatory variable is the contract awarding method and the its reference level is the *Sealed-bid auction*. Trustee sample includes the contracts awarded only by trustee mayors. Elected (AKP) sample includes contracts awarded by elected (AKP) mayors after the first trustee appointment. Covariates include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. *Industry FE (2-digit)* and *Industry FE (3-digit)* variables indicate the industry code of the procurement and include 44 and 182 levels, respectively. Standard errors are clustered at the municipality level. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

We finally investigate the shifts in *contracts market concentration* when trustee mayors exert increased discretion by invoking either the unforeseen event or the threshold clause. To this end, we compute the Herfindahl-Hirschman Index (HHI) by squaring the sum of individual contractors' share of state contracts from trustee-run municipalities. An HHI of 0 indicates a perfectly competitive market, whereas an HHI of 1 indicates a monopolized market. Figure 5 displays the HHI values for contracts separately for the set of contracts awarded with each auction method. Contracts granted with greater discretion, either via the unforeseen event or threshold clause, exhibit an HHI nearly three times higher than those obtained through sealed-bid auctions, indicating a pronounced recurrence of specific contractors and a reduction in competition.[32] Figure A.13, A.14, and A.15 in the Appendix

[32]We report the HHI indices for the sets of contracts granted by elected AKP and DBP mayors in Figure A.12 in the Appendix. Trustee, AKP, and DBP mayors exhibit comparable levels of HHI for contracts awarded with sealed-bid auctions. The HH indices increase more under elected AKP and DBP mayors

also show that the *localness* of contractors decreases when the contracts are granted with more discretionary methods through the unforeseen event or threshold clause.[33]

Figure 5: HHI in trustee-run municipalities



Notes: The figure plots the Herfindahl-Hirschman Index (HHI) of the *contracts market* in trustee-run municipalities for each auction method. HHI is calculated as the squared sum of each contractor's share in the state contracts, separately, for each auction method. An HHI of 0 indicates a perfectly competitive market, whereas an HHI index of 1 indicates a monopolized market.

5.3 Unpacking Mechanisms

In this section, we probe the potential underlying mechanisms that can help explain the observed differences between elected and centrally appointed trustee mayors. We first look at the major mechanisms proposed in the literature. Then, we investigate other potential mechanisms that are specific to our context in the second part.

5.3.1 Coordination Benefits and Aiming for Higher Quality vs Lack of Accountability

In most central takeover scenarios, there are many simultaneous effects operating through multiple channels that make it hard to disentangle the underlying mechanisms. For example,

compared to trustee mayors, especially when they invoke the unforeseen event clause, indicating a reduction in competition. However, note that the unforeseen event clause is exploited much less often by elected AKP and DBP mayors compared to the trustee mayors.

[33]The *localness* variable measures the local contract share of a contractor and it is defined at the firm-province level. More formally, for a contractor i in province k, it is defined as the share of contracts (in real prices) contractor i receives specifically from province k in the pre-treatment era.

when the political centralization reforms transfer the responsibilities of some local offices to a central one, the central office utilizes not only a larger budget operationalized over many localities but also a stronger authority overall. While the larger budget and operation scope can create economies of scale and coordination benefits, stronger authority would mean a lack of checks and balances that could harm the decision-making process. Our setting is unique in the sense that central takeovers solely result in the transitioning of the appointed governors to the mayor position within the affected municipalities. Since it is the same office, only with different mayors, there is no change in the fiscal and administrative authority of the mayoral offices. This reduces the number of candidate mechanisms to a few so that we can actually investigate each and offer insights.

We first consider the relevance of potential coordination benefits from a more centralized governance structure as a result of the takeover of almost a hundred municipalities by the central government. We posit that centrally appointed mayors could have been coordinated by the central ruler to jointly decide on the services to provide in their localities so that they better account for geographical spillovers or leverage economies of scale (Seabright, 1996; Toral, 2022; Arora et al., 2023). In such situation, one would expect the composition of spending via procurement to change compared to pre-takeover periods if the central ruler or coordinated mayors now take into account the geographical spillovers, economies of scales, etc. when providing public services.

To test this, we compare the trustee mayors to the elected mayors whom they replaced in terms of their composition of spending. Table 6 indicates that trustee mayors mostly do not differ from the elected mayors much in terms of their share of spending on important public services except education and transportation. These statistically significant differences in education and transportation are, however, too small in magnitude to imply a shift in spending patterns after takeovers. Additionally, to check whether trustee mayors leverage economies of scale, we test whether the contract terms are better under trustee mayors compared to elected mayors when both use sealed-bid auctions. As reported in Table A.6, we do not find any change in either contract prices or value for money.

The second potential mechanism relates to a central discussion in political economy about whether more discretion used by politicians leads to improved quality of procurement (see, e.g., Coviello et al., 2018; Decarolis et al., 2020). In our case, this would mean that the centrally appointed mayors utilized legal provisions such as the unforeseen events clause to deliver better quality services. Although we do not have data on the quality of procurement, we show suggestive evidence below making this mechanism an unlikely one.

If the trustee mayors delivered better quality services by using more discretion in contract awarding, we should then observe a higher estimated cost for a similar purchase when it is awarded through the unforeseen events clause than when it is awarded through a sealed-bid

Table 6: Composition of spending

	Agriculture	Construction	Culture	Education	Health	Public services	Security	Transportation
Trustee mayor	−0.005	0.015	0.008	−0.008**	−0.004	0.034	0.011	−0.083***
	(0.011)	(0.033)	(0.012)	(0.003)	(0.003)	(0.036)	(0.012)	(0.021)
Covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Num.Obs.	3789	3789	3789	3789	3789	3789	3789	3789

Notes: The table reports results from OLS estimations on a sample of contracts granted by trustee mayors and the elected mayors whom they replaced. The dependent variable is the monthly share of spending in the respective category. The main variable of interest is *Trustee mayor*, indicating whether the contract is granted by a trustee mayor. Covariates include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. Standard errors are clustered at the municipality level. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

auction.[34] To check whether this has been the case, we compare the estimated costs of similar contracts, as identified by the procurement type and industry code of the procurement. To further increase the comparability of the contracts, we use two industry codes: (i) 2-digit industry code culminating in 45 different industrial sectors, (ii) 3-digit industry code culminating in 181 different industrial sectors. Table 7 indicates that the estimated costs –within procurement type and industry– do not significantly change with the use of the unforeseen event clause compared to sealed-bid auction under both the trustee and the elected mayors. This indicates that there is no quality improvement –to the extent that the estimated costs of items can measure it– when the mayors exercise more discretion.

It is important to note that, there is a decline in the estimated costs under the threshold clause relative to the sealed-bid auctions. This is for two reasons. First, the threshold clause is reserved by law for small purchases. This restriction mechanically reduces the estimated cost of contracts awarded with this method compared to the other methods. Second, the observed decline is likely to be an outcome of the manipulation around the threshold: as this clause necessitates the estimated cost to be under a certain threshold, the procurers have to reduce the estimated costs either by dividing the contracts into smaller pieces or by lowering the estimated costs artificially.[35]

Finally, we investigate the plausibility of the local accountability mechanism in driving the observed differences between elected and appointed trustee mayors. As the appointed mayors do not face a downward accountability towards the local residents but an upward

[34]Note that the estimated cost of the procurement is calculated by the procuring agency prior to the contract awarding process. Therefore, when the higher quality goods are contracted instead of the regular goods they would have a higher estimated cost. The calculations are based on the unit costs of items decided annually by the Public Procurement Authority.

[35]Note that despite the estimated cost staying under the threshold, the actual contracted price can be higher than the threshold in this type of procurement.

Table 7: OLS estimates for estimated cost: trustee and elected (AKP) samples

	Dept. Variable: Estimated cost (log)			
	Trustee sample		Elected (AKP) sample	
	(1)	(2)	(3)	(4)
Ref.level: Sealed-bid auction				
Unforeseen events	0.081	0.050	−0.145	−0.126
	(0.103)	(0.113)	(0.112)	(0.114)
Threshold clause	−0.970***	−0.947***	−1.135***	−1.179***
	(0.066)	(0.076)	(0.068)	(0.082)
Covariates	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes	Yes
Industry FE (2-digit)	Yes	No	Yes	No
Industry FE (3-digit)	No	Yes	No	Yes
Num.Obs.	4322	4322	3581	3581

Notes: The table reports results from OLS estimations. The dependent variable is the estimated cost of the contract (in TL, in real terms, in log). The main explanatory variable is the contract awarding method and the reference level of it is the *Sealed-bid auction*. Trustee sample includes the contracts awarded only by trustee mayors. Elected (AKP) sample includes contracts awarded by elected (AKP) mayors after the first trustee appointment. Covariates include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. *Industry FE (2-digit)* and *Industry FE (3-digit)* variables indicate the industry code of the procurement and include 44 and 182 levels, respectively. Standard errors are clustered at the municipality level. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

accountability to the political figures that can appoint and dismiss them, they fear less from the voters, implying a decrease in local accountability.

To assess whether this has been an effective mechanism, we provide three pieces of indirect evidence. We first confirm the lack of local accountability by checking whether trustee mayors ran for election in the next local or national elections. According to the Higher Election Board (*YSK*), the institution responsible for all elections in Turkey, only 4 trustee mayors in our sample ran for election subsequent to their appointments as trustees. This indicates a lack of local accountability as most trustee mayors did not have an electoral accountability concern in mind during their trusteeship.[36] Second, reassuringly, none of the other candidates who competed in the 2019 local elections in Turkey held similar positions to trustees' primary positions: district, province, or vice governorship. So, governors switching to local politics

[36]Out of these four, two of them ran for election in their hometowns both in other regions. Therefore, only two actually were candidates in the places where they have been serving as trustees. We drop all four from the sample and repeat our main analysis. The results are in line with the main results and reported in the Appendix A.3.

is not a common phenomenon. This further strengthens the argument of appointed trustee mayors lacking local accountability.

Third, our results regarding the differential effects of central takeovers on the use of unforeseen events and threshold clauses provide supporting evidence for the –lack of– local accountability mechanism. Note that, we have already documented: i) trustee mayors abuse the unforeseen event clause much more than elected mayors, and ii) trustee mayors and elected mayors do not differ in how often they use the threshold clause but they both engage in substantial cost manipulation for more discretion in contract awarding.

These results resonate well with the findings by Ferraz and Finan (2011) and Lockwood et al. (2022) that types of malpractices that are easily detectable by voters are committed less by officials who face electoral accountability. In our setting, voters or media can easily spot unjustified uses of the unforeseen event clause through the Public Procurement Authority's electronic platform that is open to the public.[37] A subtler form of law abuse, such as cost manipulation for invoking the threshold clause, is less likely to draw public attention as this only applies to small contracts. Moreover, such cost manipulation is not detectable for individual contracts but only at a more aggregate level through gathering a sample of public contracts and using statistical methods to show bunching in the cost density distribution just below the threshold, as demonstrated in this paper.

5.3.2 Other Potential Mechanisms

In this subsection, we test and reject several alternative mechanisms that could explain the estimated differences between elected and appointed trustee mayors in their practice of procurement law. First, one could argue that trustee mayors might be using the unforeseen event clause more often due to a larger number of natural disasters in their jurisdictions. To investigate this possibility, we check whether trustee-run municipalities suffered more natural disasters during the analyzed period. According to the International Disaster Database (EM-DAT),[38] no natural disasters were recorded in the region (where both trustee-appointed and elected-mayor municipalities are located) during our period of analysis.

A second alternative mechanism is the adverse selection of governors as trustee mayors. In other words, if the governors who were appointed as trustee mayors –*trustee governors*– were "bad apples" to start with, this could explain the observed differences in contract awarding

[37] The awarding method of each contract is publicly available at the electronic platform of the *Public Procurement Authority* in Turkey. Anyone can look up whether a certain contract by a certain public entity was awarded with a sealed-bid auction or with the more discretionary method of negotiation without a prior call by invoking the unforeseen event or threshold clause.

[38] EM-DAT accepts an event as a disaster if any of the following three holds: there are at least ten deaths because of the event, 100 or more people are affected/injured or become homeless, there is a declaration by the country of a state of emergency and/or appeal for international assistance. See https://public.emdat.be/data for more details.

practices (Leon, 2013). We test this adverse selection mechanism by comparing contracts granted by trustee mayors in their governorship offices to the contracts granted by other similarly ranked governors in Turkey. The results, presented in Table A.7 in the Appendix, show that trustee governors are not different than their fellow governors in terms of their use of the unforeseen event clause, threshold clause, and sealed-bid auction method. Therefore, it is not likely that the adverse selection of governors explains the differences we observe between trustee mayors and elected AKP mayor.

Third, we investigate the possibility of centrally appointed mayors receiving more budget from the central government. To test this, we analyze the levels of the municipal spending via procurement. Specifically, we repeat our main DiD analysis with two different outcomes: monthly total and per capita spending via procurement. We show that the central takeovers increase neither monthly total nor monthly per capita spending via procurement in the treated municipalities, making it unlikely that the trustee-appointed municipalities receive more resources from the central government (see Appendix B.5).[39]

Fourth, we consider whether the effects we estimated might be due to the spillovers from the first batch of trustee appointments. This would be the case if the elected mayors from DBP –who were not sacked yet– changed their behavior after witnessing the first set of appointments. Nevertheless, the dynamic effects in pre-treatment periods reported in Figures 2, 3, and A.1 do not support this narrative as the never-treated control group and to-be sacked DBP mayors follow parallel trends until the trustee takeovers.

Another alternative explanation of our results concerns the levels of violence in the region of interest, which has a history of armed conflict. We present four different pieces of evidence, each ruling out this alternative explanation in their own right. First, although the procurement law grants the procuring agencies with a distinct clause that justifies the more discretionary negotiation method for purchases regarding security, this clause is rarely used by mayors: only 1% of all contracts are granted with this clause in the region.

We then conduct three additional tests. First, we run our analysis on a sample of geographically-matched municipalities. We match each trustee-appointed municipality to the three closest neighboring municipalities. This geographically matched sample ensures that treated and control municipalities experience similar levels of violence as the violent events typically take place in rural areas outside the municipal boundaries. The results from the geographically matched sample are substantively similar to our main DiD results, reported in Appendix B.3. Second, we repeat our main analysis by omitting municipalities

[39] As a caveat, we should note that the central government can use other methods to support the trustees, such as letting them hire more workers or easing their financing constraints. We cannot analyze such factors due to the lack of data. However, even if such complementary methods are used, we contend that the agenda of the government would be mainly reflected in procurement as it is the most direct way of transferring resources to the localities.

that experienced armed conflicts within their urban centers during the heightened period of violence in 2015, commonly referred to as the *Hendek* incidents in Turkey. Third, we replicate our main analysis by excluding all municipalities that witnessed above-average violent events (both urban and rural) from our sample based on the pre-treatment violence. The results, reported in Appendix B.4, are again substantively similar to our main results.[40]

6 Conclusion

The intricate relationship between the powers of central and local governments has, for long, been a subject of significant debate. Leveraging a unique setting in Turkey, this paper sheds light on the effects of central government takeovers of local jurisdictions on public procurement practices, specifically focusing on law abuse and economic efficiency. Our findings provide robust evidence that trustee mayors, appointed by the central government, display increased tendencies towards exploiting legal loopholes, notably the unforeseen event clause, in public procurement regulations, unlike their elected counterparts. Such law abuse costs the public in terms of inflated contract prices and reduced value for money.

This alteration in behavior under central takeover comes with tangible economic repercussions. A significant increase in contract prices and a pronounced decrease in value-for-money underscore the economic inefficiencies introduced by these centrally appointed officials. Moreover, the higher Herfindahl-Hirschman Index (HHI) readings for contracts awarded with greater discretion highlight a clear trend towards diminished competition, evidenced by repeated engagement with specific contractors.

Our work contributes to the literature in three key ways. First, it introduces rigorous causal evidence into the discussion of authoritarianism's local repercussions with fresh insights from Turkey's authoritarian context. Secondly, it unpacks the potential mechanisms that underlie the behaviors of central appointees, emphasizing the profound role local accountability plays in shaping administrative decisions at the subnational level. Lastly, by introducing a novel metric for gauging law abuse, our study expands the analytical toolkit available for scrutinizing procurement discretion, offering future researchers a more comprehensive lens through which to view such issues.

In summary, as countries grapple with the implications of increasing authoritarianism and its concomitant drive for clinching power in the local (Malesky et al., 2014), understanding the nuanced impacts of such shifts on governance becomes ever more critical. Our findings from Turkey underscore the importance of preserving local accountability structures

[40]To identify municipalities with violent event in our sample of period, we use data from *Uppsala Conflict Data Program* (UCDP). UCDP defines an event as: "An incident where armed force was used by an organised actor against another organized actor, or against civilians, resulting in at least 1 direct death at a specific location and a specific date".

to safeguard both economic efficiency and the rule of law. While central takeovers might offer a facade of streamlined governance, our findings suggest that they may, in reality, erode the rule of law and compromise economic efficiency at the grassroots level.

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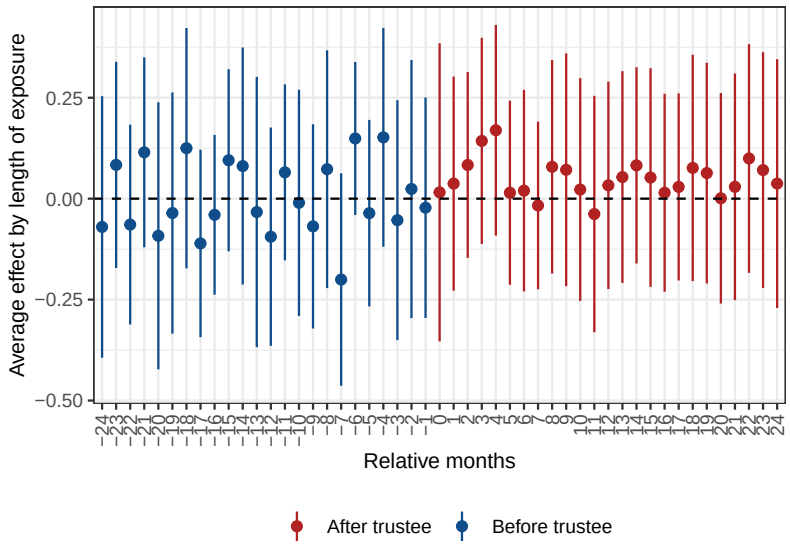
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A Appendix: Robustness Tests

A.1 Unconditional Parallel Trends

A.1.1 Outcome: monthly share of contracts awarded with threshold clause

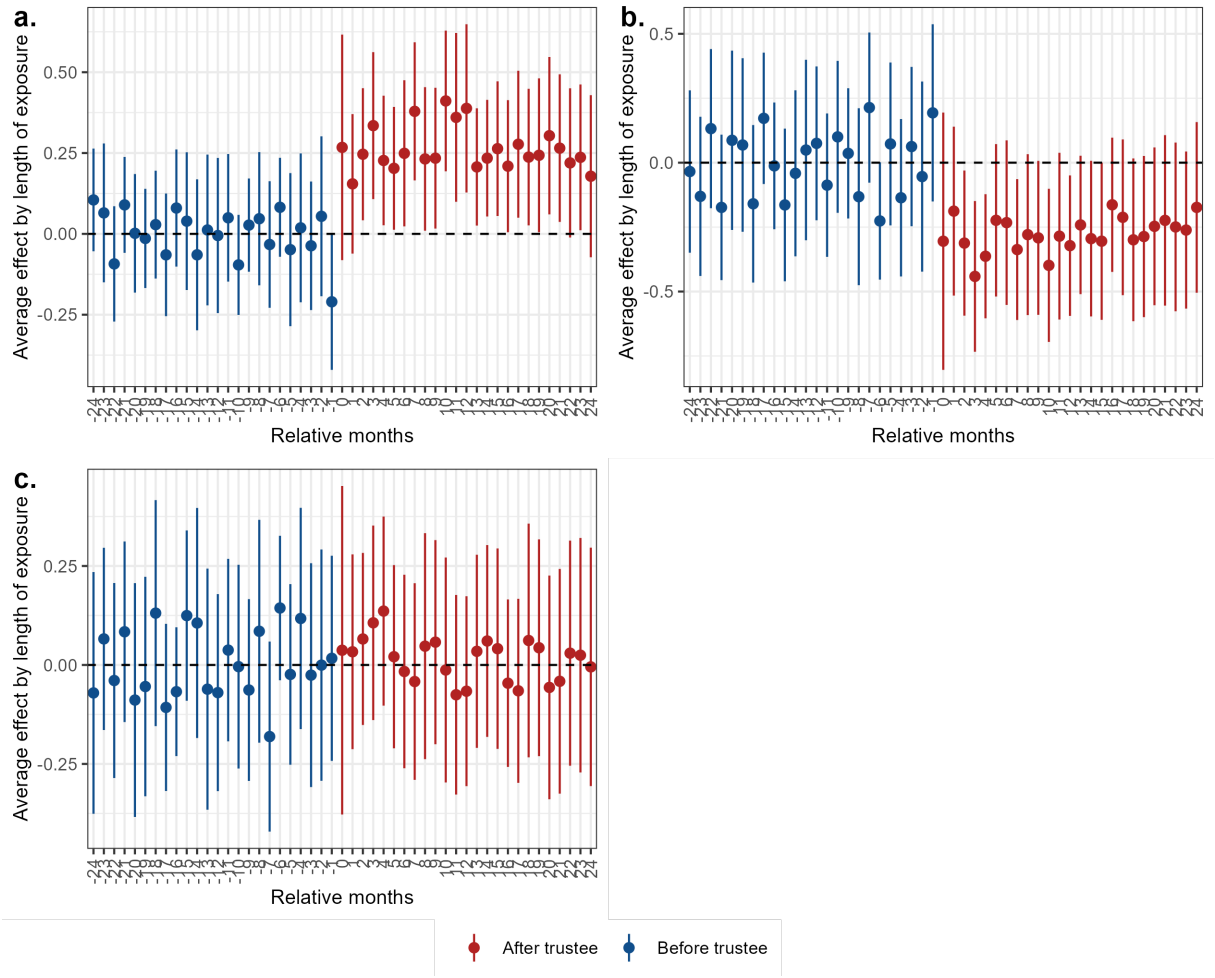
Figure A.1: Dynamic effects: share of contracts awarded with the threshold clause



Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly share of contracts awarded with the threshold clause. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

A.1.2 Outcome: monthly share of spending based on contract prices

Figure A.2: Dynamic effects: share of spending based on contract prices

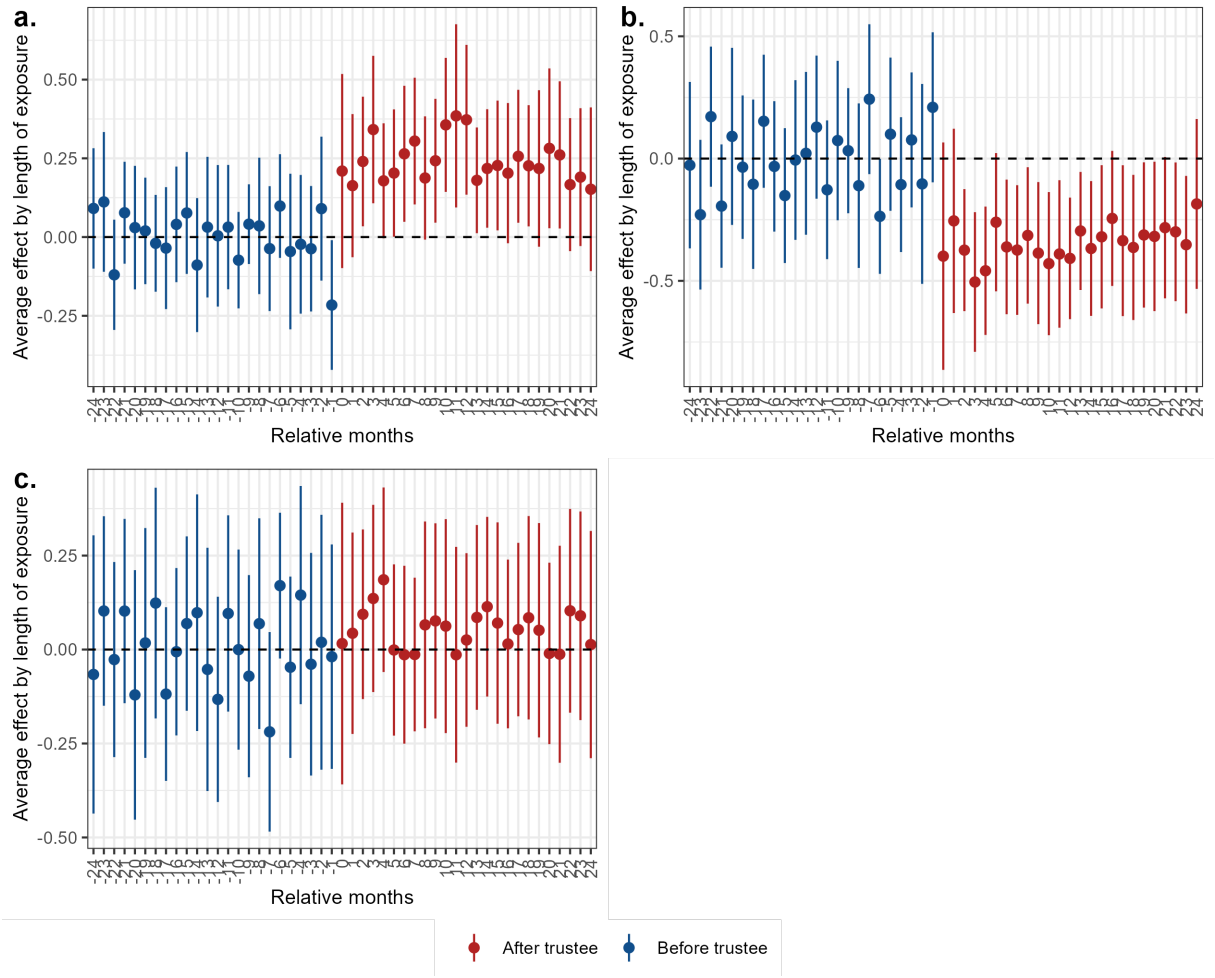


Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly share of spending based on contract prices with unforeseen event clause in Panel (a), sealed-bid auction in Panel (b), and threshold clause in Panel (c). Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

A.2 Conditional Parallel Trends

A.2.1 Outcome: monthly share of contract awarding methods

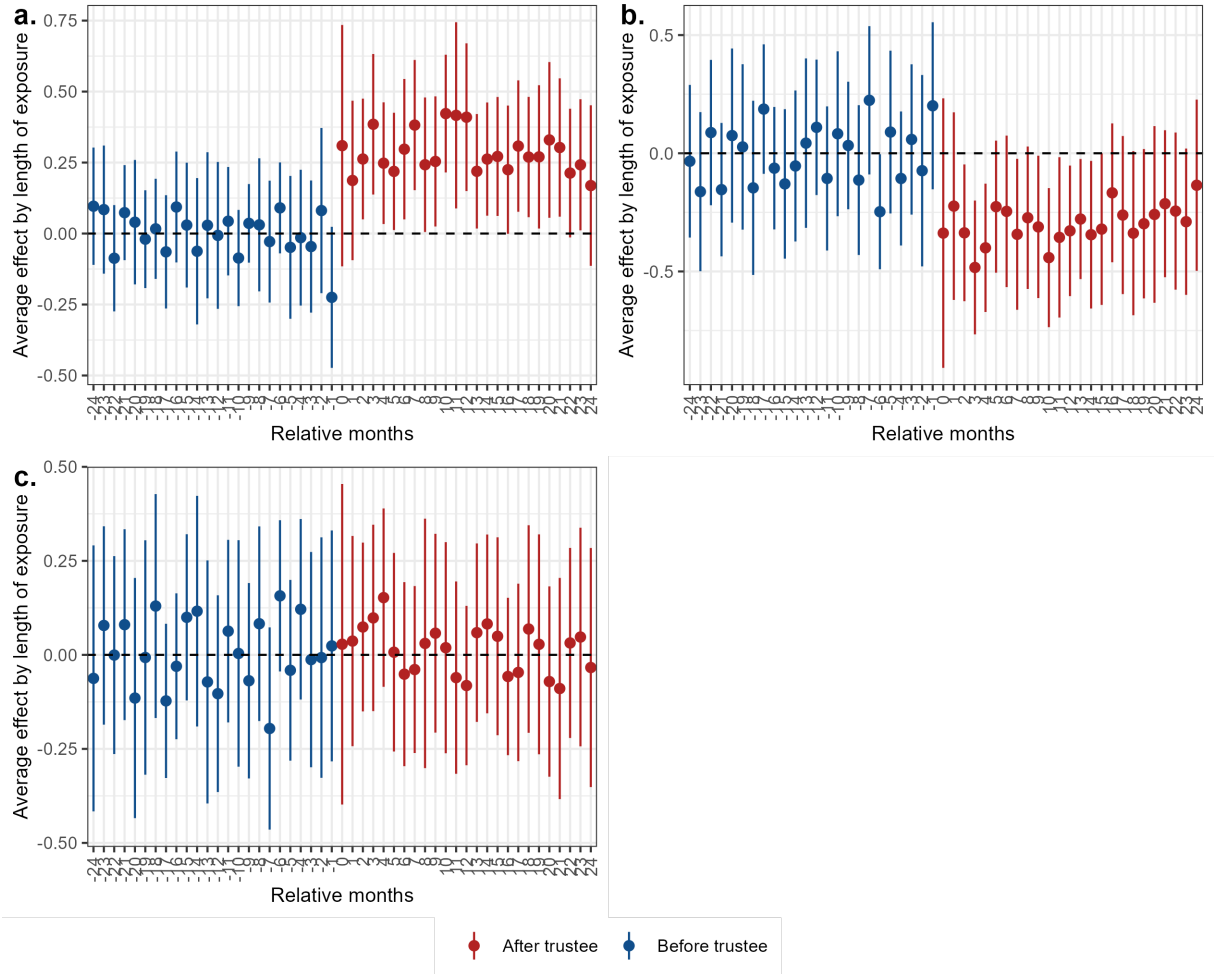
Figure A.3: Dynamic effects: monthly share of contract awarding methods



Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly share of unforeseen event clause in Panel (a), sealed-bid auction in Panel (b), and threshold clause in Panel (c). The estimations control for population, number of business enterprises at the municipal level and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

A.2.2 Outcome: monthly share of spending based on contract prices

Figure A.4: Dynamic effects: monthly share of spending based on contract prices



Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly share of spending based on contract prices with unforeseen event clause in Panel (a), sealed-bid auction in Panel (b), and threshold clause in Panel (c). The estimations control for population, number of business enterprises at the municipal level and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

A.3 Dropping Trustees Who Ran for Election

Table A.1: DiD estimates: monthly share of contract awarding methods

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.221	0.225	−0.295	−0.306	0.024	0.025
	[0.134, 0.308]	[0.132, 0.318]	[−0.429, −0.161]	[−0.450, −0.163]	[−0.100, 0.148]	[−0.100, 0.151]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.12	0.12	0.61	0.61	0.26	0.26
Num.Obs.	4552	4552	4552	4552	4552	4552

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

Table A.2: DiD estimates: monthly share of spending based on contract prices

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.261	0.272	−0.236	−0.244	−0.025	−0.027
	[0.179, 0.343]	[0.173, 0.370]	[−0.382, −0.090]	[−0.388, −0.101]	[−0.161, 0.111]	[−0.154, 0.099]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.13	0.13	0.65	0.65	0.22	0.22
Num.Obs.	4504	4504	4504	4504	4504	4504

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of spending with the respective contract awarding method and calculated based on contract prices. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

A.4 Not-yet-treated Municipalities as a Control Group

Table A.3: DiD estimates: monthly share of contract awarding methods

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Trustee	0.225	0.232	−0.301	−0.319	0.028	0.035
	[0.149, 0.301]	[0.149, 0.315]	[−0.424, −0.179]	[−0.442, −0.195]	[−0.096, 0.151]	[−0.075, 0.145]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.12	0.12	0.6	0.6	0.28	0.28
Num.Obs.	4968	4968	4968	4968	4968	4968

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

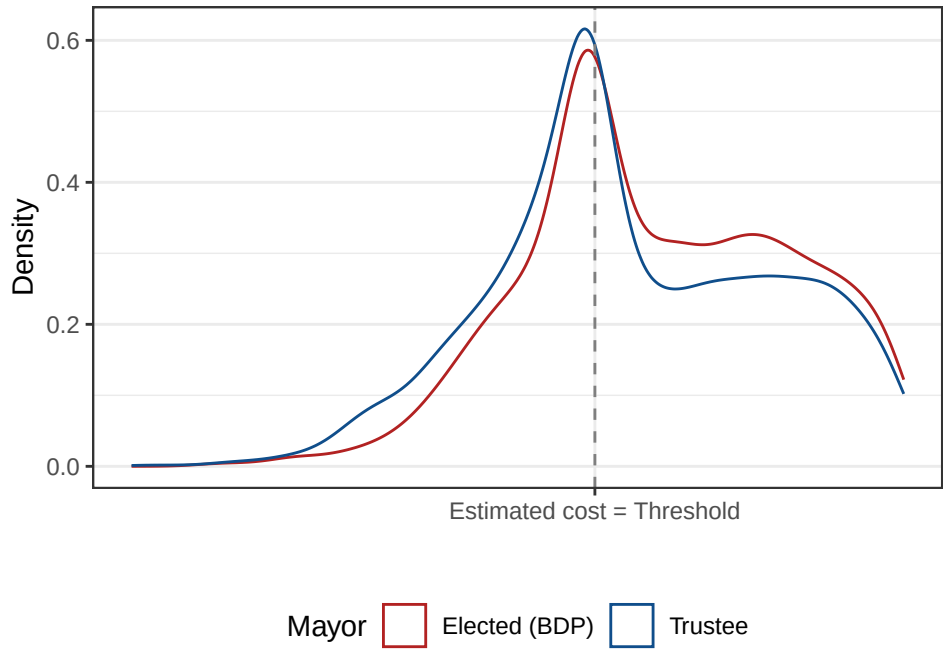
Table A.4: DiD estimates: monthly share of spending based on contract prices

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Trustee	0.270	0.283	−0.258	−0.274	−0.012	−0.010
	[0.186, 0.354]	[0.195, 0.372]	[−0.401, −0.116]	[−0.403, −0.144]	[−0.140, 0.116]	[−0.130, 0.111]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.13	0.13	0.64	0.64	0.23	0.23
Num.Obs.	4918	4918	4918	4918	4918	4918

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of spending with the respective contract awarding method and calculated based on contract prices. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

A.5 Cost Manipulation: Trustee mayors vs. Elected (DBP) Mayors

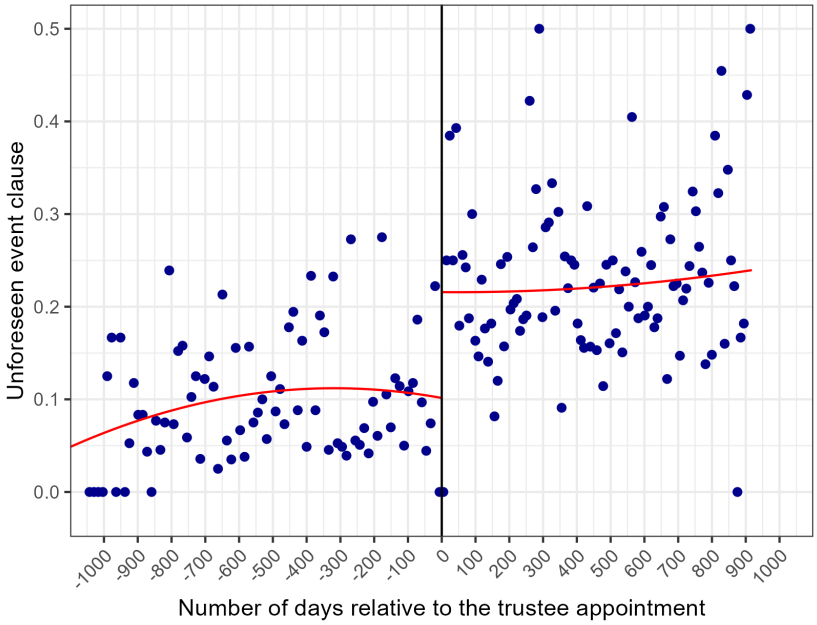
Figure A.5: Bunching around the threshold for expanded discretion: elected (DBP) vs. trustee mayors



Notes: The figure plots the density distributions of estimated cost of contracts under elected (DBP) and trustee mayors. The dashed line corresponds to the threshold value below which the procuring authority attains more discretion in contract awarding process.

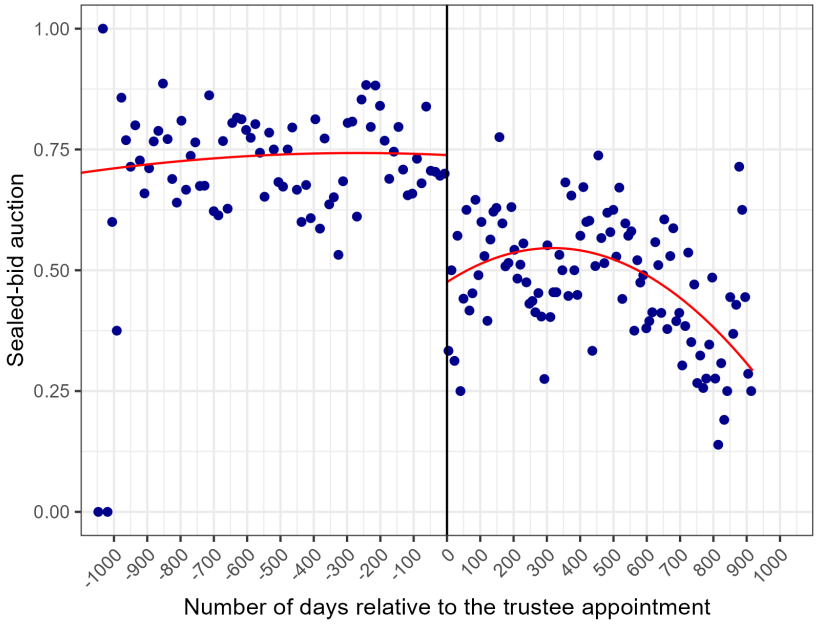
A.6 RDiT Analysis: RD Plots and Estimates

Figure A.6: Regression discontinuity (RD) plot: unforeseen event clause



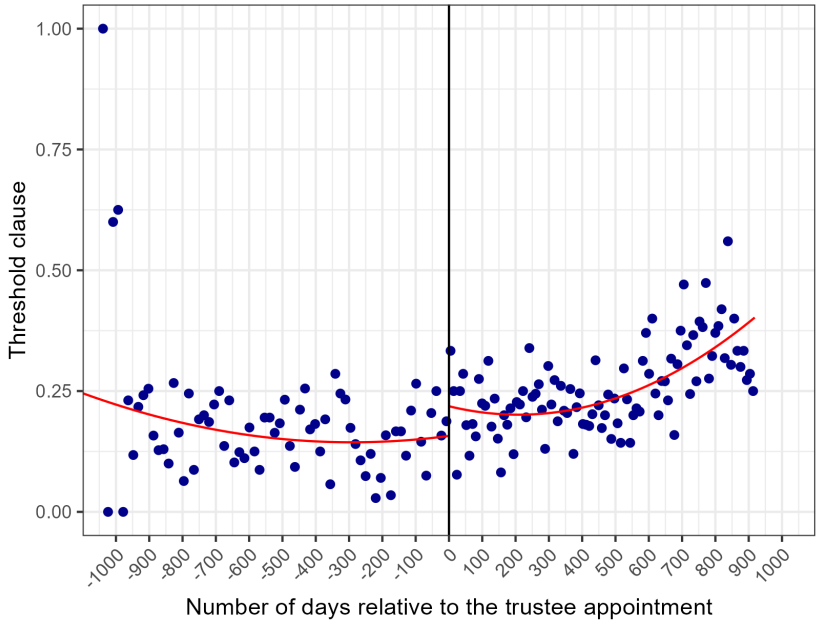
Notes: The figure presents the RD plot for the use of unforeseen event clause with binned sample mimicking the underlying variability of the data (Calonico et al., 2015). The dependent variable is a binary indicator of whether the contract is awarded with the unforeseen event clause. The cut-off is the trustee appointment day. Polynomials of order 2 are fitted on each side of the cut-off using a triangular kernel.

Figure A.7: Regression discontinuity (RD) plot: sealed-bid auction



Notes: The figure presents the RD plot for the use of sealed-bid auctions with binned sample mimicking the underlying variability of the data (Calonico et al., 2015). The dependent variable is a binary indicator of whether the contract is awarded with a sealed-bid auction. The cut-off is the trustee appointment day. Polynomials of order 2 are fitted on each side of the cut-off using a triangular kernel.

Figure A.8: Regression discontinuity (RD) plot: threshold clause



Notes: The figure presents the RD plot for the use of threshold clause with binned sample mimicking the underlying variability of the data (Calonico et al., 2015). The dependent variable is a binary indicator of whether the contract is awarded with the threshold clause. The cut-off is the trustee appointment day. Polynomials of order 2 are fitted on each side of the cut-off using a triangular kernel.

Table A.5: Regression discontinuity in time (RDiT) estimates using manual bandwidth: 360 days

	Unforeseen event		Sealed-bid acution		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee mayor	0.241***	0.259***	−0.295***	−0.310***	−0.045	−0.028
	(0.070)	(0.057)	(0.086)	(0.064)	(0.070)	(0.064)
Num.Obs.	7879	7879	7879	7879	7879	7879
Num.Obs.Effective.Left	1370	1370	1370	1370	1370	1370
Num.Obs.Effective.Right	1820	1820	1820	1820	1820	1820
Covariates	No	Yes	No	Yes	No	Yes
Year FE	No	Yes	No	Yes	No	Yes
Province FE	No	Yes	No	Yes	No	Yes
Procurement type FE	No	Yes	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes	No	Yes
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Pre-trustee mean	0.1	0.1	0.74	0.74	0.16	0.16

Notes: The table reports estimates obtained from RDiT estimations using Calonico et al. (2015) with triangular kernel and the manually chosen 360-day bandwidth for both sides of the cut-off. The dependent variables are binary indicators of whether the contract is awarded with the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. *Industry FE* variable indicates the industry code of the procurement and include 44 levels. Standard errors are clustered at the municipality level. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B Appendix: Alternative Mechanisms

B.1 Economies of Scale: Sealed-bid Auctions Subsample

Table A.6: Economies of scale: sealed-bid auctions subsample

	Price (log)	Rebate
Trustee mayor	−0.210	0.014
	(0.226)	(0.014)
Covariates	Yes	Yes
Year FE	Yes	Yes
Province FE	Yes	Yes
Procurement type FE	Yes	Yes
Industry FE	Yes	Yes
Num.Obs.	4753	4737

Notes: The table reports results from OLS estimations on the sample of contracts awarded with sealed-bid auctions by the municipalities that have been appointed a trustee mayor, before and after trustee appointments. The dependent variable is a binary indicator of whether the contract is awarded with the respective contract awarding method. The main explanatory variable, *Trustee*, is a binary indicator of whether the contract is awarded by a trustee mayors. Covariates include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. *Industry FE* variable indicates the industry code of the procurement and include 44 levels. Standard errors are clustered at the province level. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.2 Adverse Selection of Governors as Trustee Mayors

Table A.7: Adverse selection of governors as trustee mayors

	Unforeseen events	Sealed-bid auctions	Threshold clause
Trustee Governor	−0.018	−0.050	0.086
	(0.037)	(0.077)	(0.082)
Year FE	Yes	Yes	Yes
Province FE	Yes	Yes	Yes
Procurement type FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Num.Obs.	1825	1825	1825
R2	0.145	0.300	0.371
R2 Adj.	0.084	0.250	0.326

Notes: The table reports results from OLS estimations on the sample of contracts awarded by all district governors before the trustee appointments take place. The dependent variable is a binary indicator of whether the contract is awarded with the respective contract awarding method. The main explanatory variable, *Trustee Governor*, is a binary indicator of whether the contract is awarded by a governor who has been appointed as a trustee mayor later on. Covariates include population and number of enterprises at the municipality level, and the level of nightlight at the district level. *Procurement type FE* indicates the type of the procurement: goods, services, or construction. *Industry FE* variable indicates the industry code of the procurement and include 44 levels. Standard errors are clustered at the province level. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.3 DiD Analysis: Geographically Matched Sample

Table A.8: DiD estimates: monthly share of contract awarding methods

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.209	0.191	−0.287	−0.283	0.048	0.059
	[0.108, 0.310]	[0.087, 0.294]	[−0.408, −0.165]	[−0.409, −0.157]	[−0.057, 0.153]	[−0.041, 0.159]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.14	0.14	0.59	0.59	0.25	0.25
Num.Obs.	3771	3771	3771	3771	3771	3771

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

Table A.9: DiD estimates: monthly share of spending based on contract prices

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.235	0.217	−0.225	−0.219	−0.010	0.002
	[0.128, 0.342]	[0.108, 0.327]	[−0.362, −0.089]	[−0.363, −0.076]	[−0.127, 0.108]	[−0.104, 0.108]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.16	0.16	0.63	0.63	0.22	0.22
Num.Obs.	3722	3722	3722	3722	3722	3722

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of spending with the respective contract awarding method and calculated based on contract prices. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

B.4 DiD Analysis: Excluding Areas with Violent Events

Table A.10: DiD estimates: monthly share of contract awarding methods (excluding *Hendek* incidents)

	Unforeseen events		Sealed-bid auctions		Threshold caluse	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.205	0.211	−0.281	−0.291	0.021	0.024
	[0.122, 0.288]	[0.123, 0.300]	[−0.428, −0.134]	[−0.445, −0.137]	[−0.133, 0.176]	[−0.119, 0.166]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.12	0.12	0.61	0.61	0.26	0.26
Num.Obs.	4074	4074	4074	4074	4074	4074

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrapped-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

Table A.11: DiD estimates: monthly share of spending based on contract prices (excluding *Hendek* incidents)

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.241	0.253	−0.234	−0.234	−0.007	−0.019
	[0.161, 0.322]	[0.159, 0.347]	[−0.390, −0.078]	[−0.399, −0.069]	[−0.155, 0.141]	[−0.155, 0.117]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.13	0.13	0.65	0.65	0.22	0.22
Num.Obs.	4033	4033	4033	4033	4033	4033

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of spending with the respective contract awarding method and calculated based on contract prices. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrapped-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

Table A.12: DiD estimates: monthly share of contract awarding methods (excluding municipalities with the above-average armed conflict)

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.196	0.212	−0.267	−0.292	0.014	0.017
	[0.107, 0.285]	[0.117, 0.306]	[−0.405, −0.129]	[−0.440, −0.144]	[−0.125, 0.154]	[−0.124, 0.157]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.12	0.12	0.61	0.61	0.26	0.26
Num.Obs.	4079	4079	4079	4079	4079	4079

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

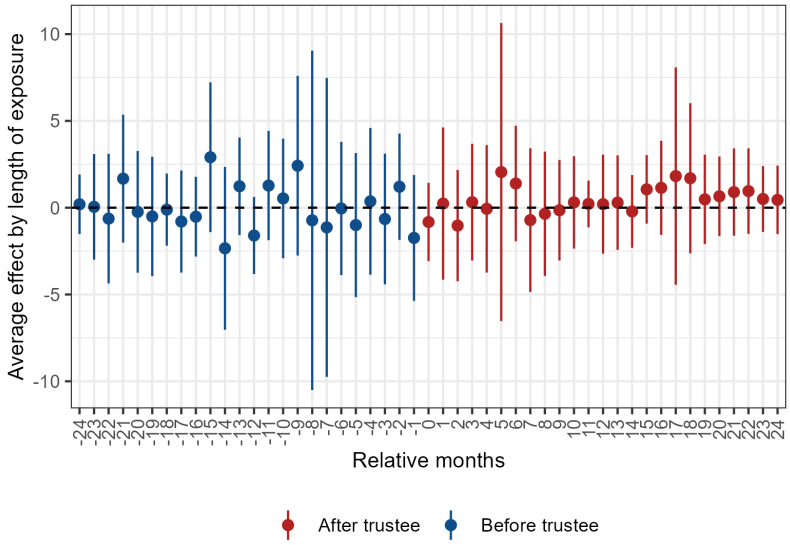
Table A.13: DiD estimates: monthly share of spending based on contract prices (excluding municipalities with the above-average armed conflict)

	Unforeseen events		Sealed-bid auctions		Threshold clause	
	(1)	(2)	(3)	(4)	(5)	(6)
Trustee	0.224	0.250	−0.197	−0.226	−0.027	−0.024
	[0.136, 0.311]	[0.140, 0.360]	[−0.353, −0.040]	[−0.381, −0.071]	[−0.168, 0.114]	[−0.167, 0.120]
Controls	No	Yes	No	Yes	No	Yes
Control group mean	0.13	0.13	0.65	0.65	0.22	0.22
Num.Obs.	4029	4029	4029	4029	4029	4029

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly share of the respective contract awarding method. Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

B.5 Monthly Spending via Procurement

Figure A.9: Dynamic effects: monthly total spending via procurement



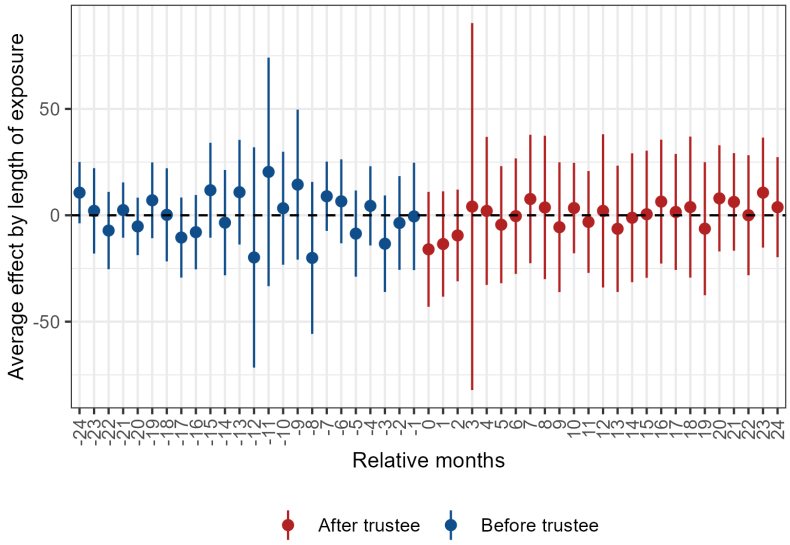
Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the monthly total spending via procurement. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

Table A.14: DiD estimates: monthly total spending via procurement

	Total spending in procurement (in million TL)	
	Model 1	Model 2
Trustee	1.384	1.607
	[−0.692, 3.461]	[−0.536, 3.750]
Controls	No	Yes
Num.Obs.	4731	4731

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the monthly total spending in public procurement calculated from contract prices (in million TL, in real terms). Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

Figure A.10: Dynamic effects: monthly per capita spending via procurement



Notes: The figure plots the dynamic effects from staggered DiD estimations using Callaway and Sant'Anna (2021) based on length of exposure to the treatment. The outcome variable is the total monthly spending via procurement. Bootstrap-based 95% confidence intervals are robust to multiple hypothesis testing.

Table A.15: DiD estimates: monthly per capita spending via procurement

	Per capita spending in procurement (in TL)	
	Model 1	Model 2
Trustee	59.247	52.194
	[−102.466, 220.960]	[−85.652, 190.040]
Controls	No	Yes
Num.Obs.	4731	4731

Notes: The table reports the DiD estimates obtained from staggered DiD estimations using Callaway and Sant'Anna (2021). The outcome variable is the per capita monthly spending in public procurement calculated from contract prices (in TL, in real terms). Controls include population and number of enterprises at the municipality level, and the level of nightlight at the district level. Bootstrap-based 95% confidence intervals are given in parentheses and are robust to multiple hypothesis testing.

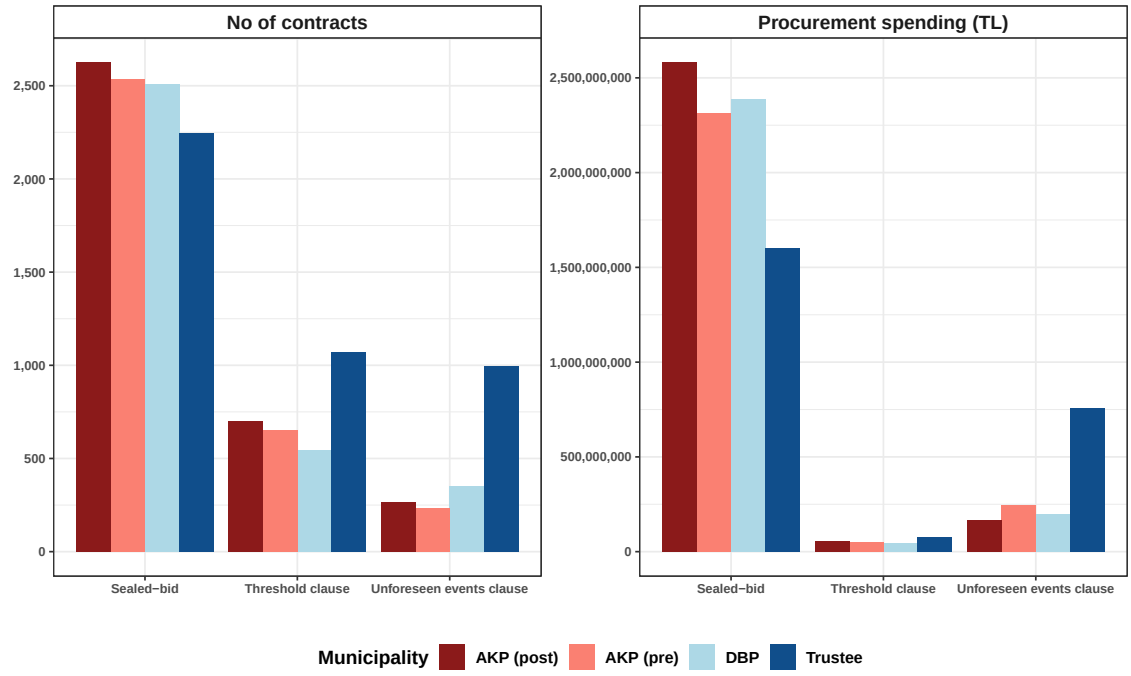
B.6 Number of Contracts and Total Spending via Procurement

Table A.16: Number of Contracts and Total Spending via Procurement

Category & Variable	DBP	Trustee	AKP (pre)	AKP (post)
All				
No of contracts	3404	4318	3416	3592
Procurement spending (TL)	2,631,216,285.00	2,433,406,249.00	2,608,569,560.00	2,802,085,447.00
Sealed-bid				
No of contracts	2510	2247	2533	2625
Procurement spending (TL)	2,388,449,959.00	1,598,870,146.00	2,313,564,486.00	2,581,195,821.00
Unforeseen event				
No of contracts	350	998	232	267
Procurement spending (TL)	197,287,045.00	757,580,326.00	243,539,675.00	166,127,987.00
Threshold clause				
No of contracts	544	1073	651	700
Procurement spending (TL)	45,479,280.00	76,955,778.00	51,465,400.00	54,761,640.00

Notes: The table presents the no of contracts granted and total amount of money spent via procurement for DBP, trustee, and AKP mayors. *DBP* indicates the contracts granted by DBP mayors who are replaced by trustee mayors. *AKP (pre)* indicates the contracts granted by AKP mayors before the first set of appointments on September 11, 2016. *AKP (post)* indicates the contracts granted by AKP mayors after September 11, 2016. *Procurement spending* indicates the total spending via procurement in Turkish Liras (TL) in 2010 constant prices.

Figure A.11: Number of Contracts and Total Spending via Procurement



Notes: The figure plots the no of contracts and total spending (TL, in 2010 constant prices) via procurement for AKP, DBP, and trustee mayors.

C Appendix: List of DBP Municipalities with Appointed Trustees

Table A.17: Metropolitan Municipalities, in Alphabetical Order

Name of the Province	Appointment Date	Name of the Trustee	Governorship Office	Province Category
Ağrı	03.01.2017	Musa Işın	Governor of the Province (GP)	3rd
Batman	11.09.2016	Ertuğ Şevket Aksoy	GP	3rd
Bitlis	27.11.2016	Ahmet Çınar	GP	4th
Dersim	17.11.2016	Olgun Öner	Vice GP	4th
Diyarbakır	01.11.2016	Cumali Atilla	Etimesgut, Ankara Governor	2nd
Hakkari	11.09.2016	Cüneyt Epçim	Vice GP	4th
Mardin	17.11.2016	Mustafa Yaman	GP	2nd
Siirt	17.11.2016	Ceyhun Dilşad Taşkın	Vice GP	4th
Şırnak	11.09.2016	Turan Bedirhanoğlu	Vice GP	4th
Van	17.11.2016	İbrahim Taşyapan	GP	2nd

Table A.18: District Municipalities, in Alphabetical Order

District / Province	Appointment Date	Name of the Trustee	Governorship Office	District Category
Akdeniz / Mersin	18.12.2016	Hamdi Bilge Aktaş	GP	1
Akpazar / Dersim	10.05.2017	Kenan Aktaş	Mazgirt, Dersim Gov.	4
Artuklu / Mardin	13.12.2016	Şakir Öner Öztürk	GP	3
Atabağı / Siirt	18.03.2017	Mehmet Kocabey	Baykan, Siirt Gov.	4
Bahçesaray / Van	16.02.2017	Serhat Karabektaş	GP	6
Balveren / Şırnak	17.03.2017	Turan Bedirhanoğlu	Şırnak Vice Gov.	NA[41]
Başkale / Van	22.01.2017	Abdulselam Öztürk	GP	4
Başverimli / Şırnak	11.09.2016	Savaş Konak	Silopi Gov.	2
Baykan / Siirt	20.12.2016	Mehmet Kocabey	GP	4
Beğendik / Siirt	30.03.2017	Hakan Şeker	Pervari Gov.	NA

[41] Some rural towns have municipalities even though they are not a district. Hence they do not have governors and are not subject to the district categorization. Such municipalities are marked as Not Applicable (NA).

Table A.18: Continued from previous page

District / Province	Appointment Date	Name of the Trustee	Governorship Office	District Category
Beşiri / Batman	11.09.2016	Mustafa Maslak	GP	4
Beytüşşebap / Şırnak	03.03.2017	Murat Şener	GP	4
Bismil / Diyarbakır	02.04.2017	Turgay Gülenç	GP	3
Bozova / Şanlıurfa	09.01.2017	Zekeriya Göker	Elazığ Vice Gov.	4
Bulanık / Muş	11.09.2016	Ömer Şahin	GP	4
Cizre / Şırnak	11.09.2016	Ahmet Adanur	GP	2
Çaldıran / Van	15.02.2017	Tekin Dündar	GP	4
Çatak / Van	06.01.2017	Hacı Asım Akgül	GP	4
Çukurca / Hakkari	12.08.2016	Mehmet Mut	GP	4
Dargeçit / Mardin	11.09.2016	M. Yaşar Yeşiltaş	GP	4
Derik / Mardin	11.09.2016	M. Fatih Safitürk	GP	4
Dicle / Diyarbakır	14.02.2017	Alparslan Kılıç	GP	4
Digor / Kars	09.02.2017	Mustafa Güngör	GP	4
Diyadin / Ağrı	11.09.2016	Mekan Çeviren	GP	4
Doğubayazıt / Ağrı	24.01.2017	Ulaş Akhan	GP	3
Edremit / Van	11.09.2016	İbrahim Özkan	Van Vice Gov	3
Eğil / Diyarbakır	07.03.2017	Kürşad Atak	GP	4
Erciş / Van	11.09.2016	Mehmet Şirin Yaşar	GP	3
Erentepe / Muş	13.06.2017	Hacı Arslan Uzan	Bulanık, Muş Gov	NA
Eruh / Siirt	11.09.2016	Murtaza Dayanç	GP	4
Esendere / Hakkari	07.02.2017	Mahmut Kaşıkçı	Yüksekova, Hakkari Gov	NA
Fındık / Şırnak	19.01.2017	Osman Demir	Güçlükonak, Şırnak Gov	NA
Gercüş / Batman	11.09.2016	Ünal Koç	GP	4

Table A.18: Continued from previous page

District / Province	Appointment Date	Name of the Trustee	Governorship Office	District Category
Gökçebağ / Siirt	06.02.2017	Ceyhun Dilşad Taşkın	Siirt Vice Gov	NA
Görümlü / Şırnak	02.10.2017	Savaş Konak	Silopi Gov.	NA
Güroymak / Bitlis	28.11.2016	Ufuk Özen Alibeyoğlu	GP	4
Gürpınar / Van	03.02.2017	Osman Doğramacı	GP	4
Halfeti / Şanlıurfa	23.12.2016	Şeref Albayrak	GP	6
Hani / Diyarbakır	05.10.2016	Şaban Arda Yazıcı	GP	4
Hınıs / Erzurum	11.09.2016	Bülent Ay	GP	4
Hizan / Bitlis	24.12.2016	Bülent Hamitoğlu	GP	4
Hoşhaber / Iğdır	11.09.2016	Bilgehan Karanfil	Iğdır Vice Gov	NA
İdil / Şırnak	21.09.2016	Ersin Tepeli	GP	4
İkiköprü / Batman	11.09.2016	Mustafa Maslak	Beşiri, Batman Gov	NA
İpekyolu / Van	11.09.2016	Önder Can	Van Vice GP	3
Karaçoban / Erzurum	28.12.2016	Muhsin Duran Kalkan	GP	4
Karakoçan / Elazığ	31.01.2017	Cemil Sarıoğlu	GP	4
Karayazı / Erzurum	05.12.2016	Kamil Aksoy	GP	4
Kayabağlar / Siirt	12.04.2017	Musa Uçgül	Kurtalan, Siirt Gov	NA
Kayapınar / Diyarbakır	12.08.2016	Mustafa Kılıç	GP	2
Kızıltepe / Mardin	04.12.2016	Ahmet Odabaş	GP	2
Kocaköy / Diyarbakır	06.02.2017	Yusuf Turhan	GP	4

Table A.18: Continued from previous page

District / Province	Appointment Date	Name of the Trustee	Governorship Office	District Category
Konakkuran / Muş	10.05.2017	Soner Kırlı	Malazgirt, Muş Gov.	NA
Kömür / Adıyaman	29.08.2018	Adem Kaya	Adıyaman Vice Gov	NA
Kulp / Diyarbakır	23.01.2017	Fatih Dülgeroğlu	GP	4
Kumçatı / Şırnak	06.01.2017	Turan Bedirhanoğlu	Şırnak Vice Gov	NA
Lice / Diyarbakır	02.10.2017	Sinan Başak	GP	4
Malazgirt / Muş	12.02.2016	Soner Kırlı	GP	4
Mazıdağı / Mardin	11.09.2016	Halit Benek	GP	4
Muradiye / Van	17.01.2017	Mehmet Fatih Çelikel	GP	4
Mutki / Bitlis	23.12.2016	Mehmet Kılıç	GP	4
Nusaybin / Mardin	11.09.2016	Ergün Baysal	GP	3
Ovakışla / Bitlis	03.11.2016	Bülent Tekbıyıkoğlu	Ahlat, Bitlis Gov	4
Ömerli / Mardin	06.01.2017	Erol Korkmaz	GP	4
Özalp / Van	11.09.2016	Serdar Karal	GP	4
Rüstemgedik / Muş	14.04.2017	Hacı Arslan Uzan	Bulanık, Muş Gov	NA
Saray/ Van	15.02.2017	Mehmet Halis Aydın	GP	4
Savur / Mardin	01.03.2017	İdris Koç	GP	4
Sırtköy / Şırnak	08.11.2016	Ersin Tepeli	İdil, Şırnak Gov	NA
Silopi / Şırnak	11.09.2016	Savaş Konak	GP	2
Silvan / Diyarbakır	11.09.2016	Murat Kütük	GP	3
Sur / Diyarbakır	11.09.2016	Bilal Özkan	GP	2
Suruç / Şanlıurfa	11.09.2016	Tarık Açıkgöz	Şanlıurfa Vice Gov	3
Şemdinli / Hakkari	07.12.2016	M.Fuat Türkman	Bingöl Vice Gov	4

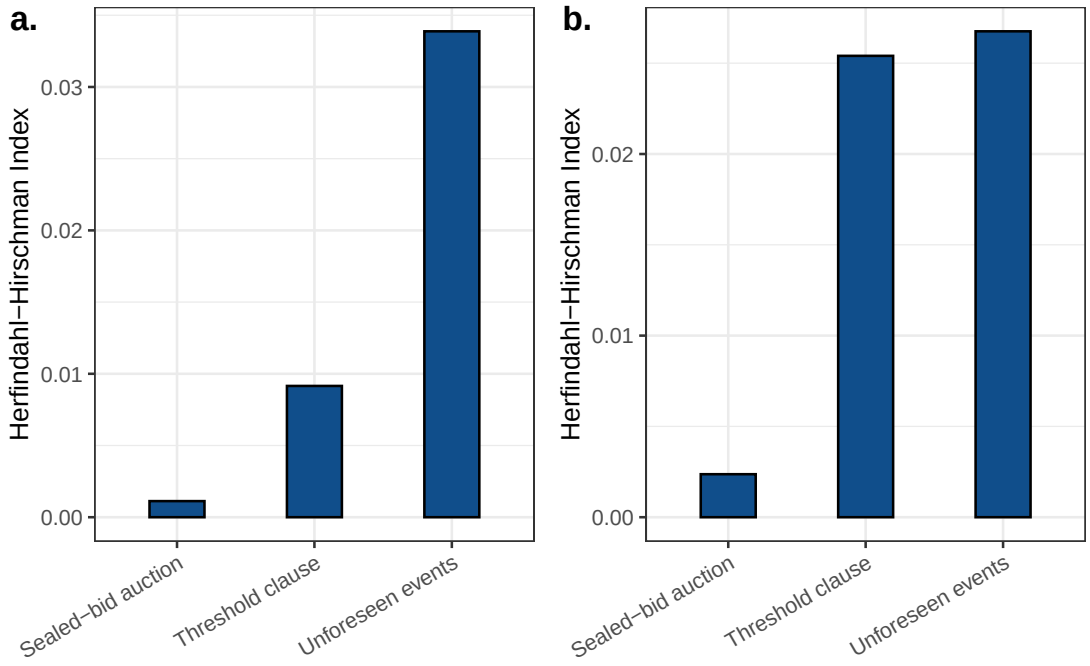
Table A.18: Continued from previous page

District / Province	Appointment Date	Name of the Trustee	Governorship Office	District Category
Tekman / Erzurum	06.01.2017	Kemal Karahan	GP	4
Tutak / Ağrı	12.01.2017	Erkan İsa Erat	GP	4
Tuzluca / Iğdır	11.09.2016	İbrahim Civalek	GP	4
Uludere / Şırnak	27.01.2017	Mehmet Fatik Yakınoğlu	GP	4
Uzgörür / Muş	11.09.2016	Ömer Şahin	Bulanık, Muş Gov	NA
Varto / Muş	11.11.2016	Mehmet Nuri Çetin	GP	4
Veysel Karani / Siirt	23.12.2016	Mehmet Kocabey	Baykan, Siirt Gov	NA
Viranşehir / Şanlıurfa	09.01.2017	Ömer Çimşit	GP	3
Yenişehir / Diyarbakır	08.12.2016	Mehmet Özel	GP	2
Yolalan / Bitlis	24.12.2016	Bülent Hamitoğlu	Hizan, Bitlis Gov	NA
Yüksekova / Hakkari	19.12.2016	Mahmut Kaşıkçı	GP	3

D Appendix: Contractors of Trustee Mayors

D.1 Repeated Contractors

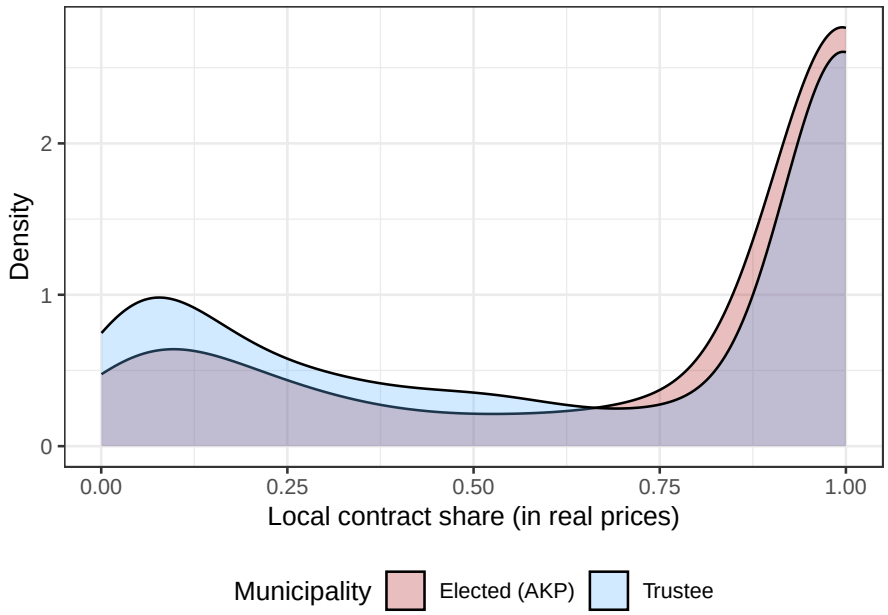
Figure A.12: Concentration of contracts in municipalities held by elected AKP and DBP mayors



Notes: The figure plots the Herfindahl-Hirschman Index (HHI) of the *contracts market* in the municipalities held by elected AKP (Panel a) and DBP (Panel b) mayors, separately for each auction method. HHI is calculated as the squared sum of each contractor's share in the state contracts, separately, for each auction method. An HHI of 0 indicates a perfectly competitive market, whereas an HHI index of 1 indicates a monopolized market.

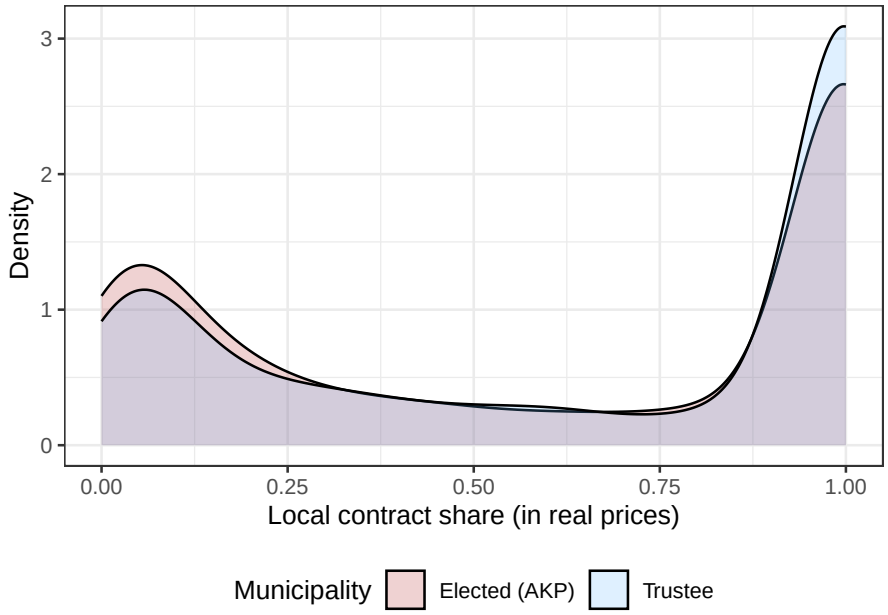
D.2 Local vs. Non-local Suppliers

Figure A.13: Density distribution of contractors based on their *localness*: contracts granted with the unforeseen event clause



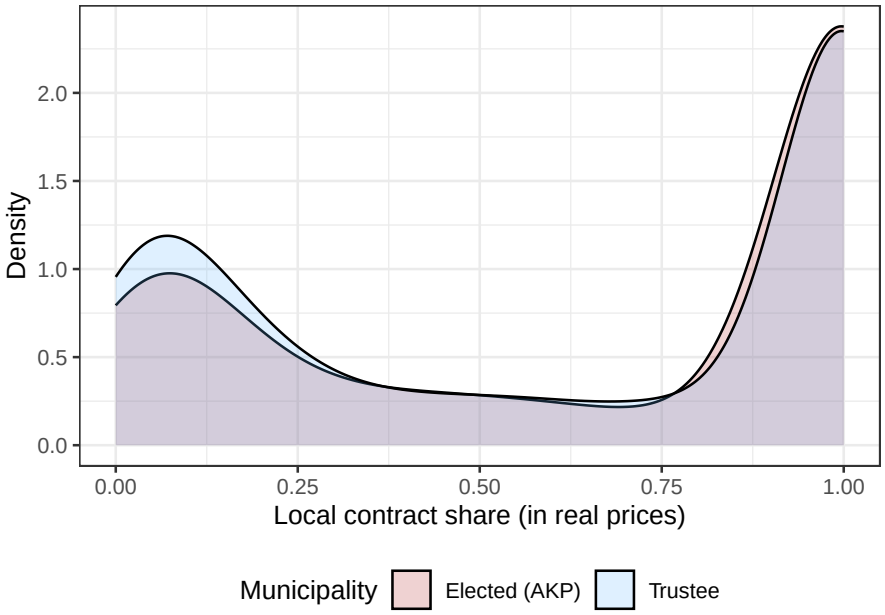
Notes: The figure plots the density distribution of post-trustee era contractors of the municipalities held by trustees and elected AKP mayors based on the contractors' local contract share, for the sample of contracts awarded through the unforeseen event clause. The local contract share of a contractor is defined at the firm-province level. More formally, for a contractor i in province k, it is defined as the share of contracts (in real prices) contractor i receives specifically from province k in the pre-treatment era.

Figure A.14: Density distribution of contractors based on their *localness*: contracts granted with sealed-bid auctions



Notes: The figure plots the density distribution of post-trustee era contractors of the municipalities held by trustees and elected AKP mayors based on the contractors' local contract share, for the sample of contracts awarded through sealed-bid auctions. The local contract share of a contractor is defined at the firm-province level. More formally, for a contractor i in province k, it is defined as the share of contracts (in real prices) contractor i receives specifically from province k in the pre-treatment era.

Figure A.15: Density distribution of contractors based on their *localness*: contracts granted with the threshold clause



Notes: The figure plots the density distribution of post-trustee era contractors of the municipalities held by trustees and elected AKP mayors based on the contractors' local contract share, for the sample of contracts awarded through the threshold clause. The local contract share of a contractor is defined at the firm-province level. More formally, for a contractor i in province k, it is defined as the share of contracts (in real prices) contractor i receives specifically from province k in the pre-treatment era.