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KOÇ UNIVERSITY-TÜSİAD ECONOMIC RESEARCH FORUM
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**THE MAYOR EFFECT:
FEMALE MUNICIPAL EMPLOYMENT UNDER
ISLAMIST POLITICAL RULE**

Gözde Çörekçiođlu

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The Mayor Effect: Female Municipal Employment Under Islamist Political Rule

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Do religiously conservative governments enact policies that limit opportunities for women? This study addresses this general question in a specific context: whether pro-Islamist politicians' preferences for traditional gender roles translate into discriminatory employment practices in Turkish municipalities. I combine data from 2009 municipal elections with a unique dataset of municipal personnel. Comparing close races for the mayor, who appoints municipal personnel, I find no evidence of gender bias with mayors from the pro-Islamist party. Conditioning on the type of incumbent, I find that the share of females among white-collars decreases in municipalities where a pro-Islamist mayor replaced a secular mayor.

KEYWORDS: Political Islam, Regression Discontinuity, Female Employment, Discrimination, Turkey

JEL codes: D72, H75, J71

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1 Introduction

Religious conservatism, especially in Islam, is associated with patriarchal values. An often-voiced concern is therefore whether religiously conservative governments undermine women's emancipation.¹ Indeed, findings from the World Values Survey demonstrate that religious people have less progressive attitudes towards women's rights, and are less favorable with respect to working women. The relationship is stronger for Muslims (Guiso et al. [2003]).

What are the welfare consequences for women when a policymaker is endowed with these beliefs? As a stable democracy ruled by a pro-Islamist party (Justice and Development Party, referred to as AKP hereafter) for the past 14 years, Turkey offers an attractive setting to study this link.² In recent years, politicians from the AKP have been emphasizing the cohesion and integrity of the family over individual empowerment of women, and reinforcing traditional gender roles in media appearances. Some examples include: "Mothers' only career should be motherhood", "You cannot make women and men equal; this is against nature".³ Moreover, Turkey is one of the worst performers among OECD countries in female labor force participation, especially in the public sector.⁴ This paper aims to establish whether there is a causal link between having a pro-Islamist politician and employment opportunities extended to women by the government.

Assuming that all politicians from the AKP share a conservative mindset, this study aims to reveal whether this conservative attitude is carried over to employment practices in the public sector. An endogeneity problem arises because patriarchal values are dominant where the pro-Islamist party is favored (and fewer women participate in the labor market). Indeed, the share of female personnel

¹Fish [2002] shows that the status of women is significantly worse in societies with religious traditions. Donno and Russett [2004] find that Islamist governments tend to support both autocratic government and repression of women's rights.

²AKP is the abbreviation for the Turkish name of the party, Adalet ve Kalkinma Partisi. Throughout the paper, I will introduce and use abbreviations for the Turkish names of political parties.

³Hurriyet Daily News [2015], Newsweek [2014]. This has raised some eyebrows in the international media as well (see New York Times [2012] and The Atlantic [2011]).

⁴Turkey lags behind all OECD countries with a female labor force participation rate of 34 %, compared to OECD average of 63 % (2013) and gender pay gap is among highest in the OECD countries with 20 % in 2010 (OECD [2015], OECD [2014]). Moreover, 61 % of the women have indicated being a housewife as their reason for not being in the labor force (Turkish Statistical Institute [2011])

is lower in municipalities governed by the AKP. To pin down a causal relationship, I follow the recent Regression Discontinuity literature that takes advantage of contested elections which generate quasi-random variation (see Lee et al. [2004], Pettersson-Lidbom [2008] and Lee [2008] among others). A closely related study is Meyersson [2014]; which investigates the effects of local Islamic rule in Turkey on education, marriage and political outcomes for females. Using the same methodology, my study expands Meyersson [2014] to public employment outcomes for females in more recent years, using original administrative data. The local government organization in Turkey allows for a direct test of this effect. Mayors have considerable discretion in the recruitment of personnel in the municipal governments. Using a unique administrative dataset of municipal personnel, I compare gender composition of employees in municipalities where the AKP won or lost the elections by a small margin. Voter fragmentation at the local level yields many close elections, providing an opportunity for causal inference.

Given prior beliefs on traditional gender attitudes in Islam, one would expect a pro-Islamist politician to discriminate against women if he is given the right to choose employees. Islamist governments can worsen women's status in the labor market by discriminating, but also improve outcomes for religious women by alleviating labor market entry barriers for women wearing headscarves (who otherwise cannot get public sector jobs). This study finds no overall effect of Islamist mayors on gender composition of municipal employees. Yet a negative Islamist mayor effect prevails in municipalities that switched to an Islamist mayor, once we condition on a secular incumbent.

The paper is outlined as follows: Section 2 surveys the literature, section 3 outlines the institutional framework, section 4 describes the data, section 5 presents the empirical results and discusses potential mechanisms, and section 6 concludes.

2 Related Literature

Despite the voiced concerns, there are no studies presenting causal evidence that democratically elected Islamist governments have disadvantaged society's, and particularly women's, well-being. On the contrary, recent studies have shown that society's and women's welfare seem to have improved in several dimensions under Islamist political rule. Blaydes [2014], finds that women living in a neighbor-

hood in Cairo ruled by radical Islamists had better reproductive health outcomes than women in a comparable neighborhood dominated by non-Islamist local leaders. While we might expect women under Islamist local leaders to marry earlier and receive less education, this study shows that this is not the case. Bhalotra et al. [2014] show that Muslim political representation improves health and education outcomes in India in the district from which the legislator is elected. Henderson and Kuncoro [2011] find lower corruption in districts where Muslim parties had higher representation in the assemblies in Indonesia.

To make sense of these results, it is important to realize that religion and Islam need not be a threat to women's interests by definition. In Turkey, there are two offsetting mechanisms that arise as a result of political Islam. On the one hand, Islamist governments can, in fact, expand opportunities for females by removing some participation constraints (e.g. alleviating the ban on headscarves in schools and workplaces). On the other hand, the propagation of patriarchal values reinforce traditional gender roles in the society. Arat [2010] refers to this trade-off between expansion of religious freedoms and threats to gender equality as "Turkey's democratic paradox".

Meyersson [2014] demonstrates this phenomenon, by showing that religiously conservative political leaders can have socially progressive effects. In municipalities where the pro-Islamist party marginally won the 1994 local elections, females were more likely to complete high school, and marry at a later age. These results are explained with the success of the pro-Islamist party on effectively removing barriers to education for the poor and pious: by increasing the number of school buildings (economic barriers), and alleviating the enforcement of headscarf ban (belief constraints).⁵ Effects are more pronounced in poorer and religiously more conservative communities.

Although Meyersson [2014] constitutes an important benchmark for this study, it is important to outline the differences between the two. First and foremost, my study estimates a direct effect of the local politician. Municipal personnel is appointed by local authorities, which allows me to isolate the effect of the local politician from any spillover effects. The outcome of interest, gender composition

⁵The Turkish mix-gender education curriculum did not allow for students to bear religious symbols at school, including the headscarf for women. This ban has been recently lifted in high school in 2014, raising a lot of controversy.

of employees within the municipal government, is one which the mayor has the possibility to influence directly. My study encompasses a more recent time frame than the former (15 years later), where Turkish politics have been relatively stable. The Islamist party which is the subject of my paper, the AKP, has been continuously in power (both at the local and national level) since 2002. The Islamist party considered in Meyersson [2014], Welfare Party (Refah Partisi), has been closed down by the constitutional court in 1998; and the study considers a period with transitory and volatile political dynamics. Moreover, Meyersson [2014] does not consider how women fare in the labor market (under Islamist political rule).

This study also contributes to the labor market studies on Turkey. Most of the existing studies on the Turkish labor market focus on the role of human capital, and suggest education as the evident policy recommendation to increase the historically low female labor force participation rate (see Dayıoğlu [2000] and Tansel [2002]). This paper tests whether cultural and social restrictions imposed on women by the religiously conservative government explains low female employment in Turkish municipalities. On the supply side, studies based on field surveys highlight the role of traditional family values in shaping women's employment decisions. For instance Dedeoğlu [2010] shows that women prioritize their role as mothers and housewives over their careers.⁶ İlkcaracan [2012] investigates the reasons behind the particularly low female employment rate in Turkey. Gendered division of labor emerges as a binding constraint on women's labor supply, and women's desire for increased autonomy as the primary motivation for women to enter the labor market. On the demand side, one needs to answer whether a religiously conservative government is an obstacle to women's employment. To my knowledge, this is the first study to causally address this question. Although the scope of the data is limited to female employment within municipal governments, the results have implications for employment opportunities for women in the public sector in general.

⁶See also Bugra [2014] and Gündüz-Hoşgör and Smits [2008] for more on this discussion.

3 Political and Institutional Framework

A close look at the structure and hiring roles of local government provide better insight for the context.

3.1 Religion and Politics in Turkey

Religion and politics have been intertwined in Turkey for a long time. Since the transition to multi-party politics in 1946, Turkey's political history has been dominated by the conflict between the secular military and religiously rooted parties. Turkey has experienced three military coups d'état and several Islamist political parties have been closed down by the military as they were perceived to undermine the secularist principles of the constitution. Table A.1 in the Appendix provides a roadmap to Turkish politics. Since 2002, Turkey has been governed by the Justice and Development Party (AKP). AKP is the biggest pro-Islamist party currently in the political arena.⁷ In 2008, the Public Prosecutor took AKP to court for the closure of the party due to its anti-secular activities, but the Constitutional Court decided against closure. The analysis in this paper concerns the 2009 local elections, which was dominated by the victory of AKP.

3.2 Local Governance

Municipalities are the main local authorities in Turkey, and provide public services (health, social assistance, education, and transportation) within their borders.⁸ Municipalities function under direct influence of a mayor, elected by the public in local elections for a five-year term.⁹ The influence of mayors have increased gradually as pressures from the central government eased in the post-1980 period.¹⁰

The law of municipalities explicitly states that mayors are in charge of municipal recruitment (creation, termination and change of positions). Municipal

⁷There are two other small pro-Islamist parties: the Welfare Party and the Great Union Party. They are not included in the main analysis, as will be explained later in the text.

⁸Municipal revenues constitute a non-negligible portion of the national budget: The revenues of local governments constitute 3.9 % of GDP, and expenses of local governments constitute 4.1% of GDP (2013 figures from Ministry of Development [2015]).

⁹The electoral rule for the mayor is plurality.

¹⁰Bayraktar [2007] provides a historical perspective on the evolution of Turkish municipal framework. Bayraktar [2007] and Bayraktar and Massicard [2012] discuss the personal empowerment of the mayors.

personnel comprises 8.7 % of total public personnel, and is employed in secretariat, fiscal services, technical services, municipal police and other units that are established with respect to specific demands of the municipalities (State Personnel Department [2015]).¹¹ Public services in municipalities are carried out by four types of staff: civil servants, permanent workers, contracted workers and temporary workers. Permanent workers and civil servants constitute the permanent staff, the focus of this study.¹²

All civil servant positions are tenured, while different contracts are available for workers. Although the data does not distinguish between permanent and temporary workers, temporary workers are either from sub-contracted firms (and hence not listed as a municipality), or recruited for a specific project (which have been dropped from the sample). Therefore the observations in the data can be treated as permanent workers in municipality positions.¹³

Civil servants and workers differ in their qualifications, tasks, and wages. Civil servants are higher-status staff and are assigned to administrative positions; while workers are assigned to more routine jobs. For ease of interpretation, I will refer to civil servants as white-collars and workers as blue-collars. White-collars need a university diploma to take a centralized Public Personnel Selection Exam, or a special exam for specific higher-status positions. There is no uniform education qualification requirement for blue-collars: qualifications differ with the task (e.g. a cleaner vs. a technician). For few (more technical) positions, a centralized exam or an elementary school diploma is required. White-collars have a higher salary (2,500 TL- 3,000 TL, equivalent to €779-€935 per month) than blue-collars (1,800 TL-2,800 TL, equivalent to €561-€872 per month).¹⁴

Municipalities have become an important ground for politicians to imple-

¹¹Expert and technical staff such as lawyers, architects, engineers, computer analysts, physicians, nurses, chemists and technicians may be employed on a contractual basis in the municipality based on the needs.

¹²Ideally an analysis on municipal personnel should also include sub-contracted workers in firms owned by municipalities, but data on this is not available. Nevertheless, I believe that the current dataset provides a cleaner identification since permanent staff (on which data exist) are under direct influence of the municipal government.

¹³This interpretation has been recommended by the Ministry of Labor, who has provided the data.

¹⁴Source: <http://maaslari.net/belediye-calislanlari-maaslari-1495.html>, Last accessed: 07.10.2016. For comparison, the minimum wage in Turkey as of January 2015 is 1,201 TL, equivalent to €375 (Eurostat). Turkish Lira-Euro exchange rate on 30.06.2016, of 0.31 is used to convert currencies.

ment their preferred policies.¹⁵ To prevent partisan and patronage policies in municipal recruitment, the principle of standards for permanent staff was established in 2007 (Resmi Gazete [2007]). Accordingly, the Ministry of the Interior determines the number, titles and qualifications of the staff that local authorities can hire.¹⁶ Within certain limits determined by the center, municipalities can freely appoint and reappoint staff.¹⁷

Hiring and firing practices are similar and inflexible for permanent staff.¹⁸ Municipalities announce vacancies to hire employees with respect to their needs, indicating the number and qualifications for the available posts (to the Employment Agency for hiring blue-collars, and to the Ministry of Interior for hiring white-collars). The municipal authorities then choose from the pool of applicants (sent by these institutions) after a written or oral exam. A change in the Municipal Decree in 2007 abolished central placement of municipal personnel after the public personnel exam. This change undermined the objectivity of the central civil servant appointment system and created room for preferential recruitment.

Since they have permanent contracts, municipalities can not lay off permanent staff unless they quit or retire. Dismissal of duty is mostly in the form of termination or transfer of positions to other public institutions. Günay [2011] reports that transfer (to or from other public institutions) has become a common form of preferential recruitment. To standardize norms for permanent staff, subsequent regulations became stricter in 2011. I investigate this interim period (2007-2011) to study whether Islamist mayors pursue different policies. Throughout this study I will assume that mayors share the mindset of their political party on gender roles, and investigate whether this carries on to recruitment practices.

¹⁵See Bayraktar and Massicard [2012]. Newspapers frequently report that civil service positions are steadily being filled with AKP partisans.

¹⁶The main criterion in determining the permanent staff is the population of the locality. In addition, type of the municipality, its touristic and industrial values are also taken into account.

¹⁷There are two strict conditions: 1. the permanent staff can not exceed the numbers determined by the central government (but it can be less). 2. spending on personnel cannot exceed 30 % of the municipal budget.

¹⁸There is more variation in temporary/contracted staff, but data is not available. In addition, this is short-term employment, and may not reveal preferences of the mayor. Hence, is less informative about the overall public sector employment.

4 Description of the Data

I combine data from several sources. Data for 2009 Local Elections comes from the Turkish Statistical Institute (TurkSTAT).¹⁹ Electoral returns data include vote counts for all parties, the number of actual and registered voters, and total vote counts for each municipality in the 2009 Local Elections.²⁰ Out of the 2,931 municipalities where elections were held for mayoral seats, the AKP won 1,309 mayoral seats. Republican People's Party (CHP), the largest secular party and the main opposition, won 514 mayoral seats. Nationalist Movement Party (MHP), the right-wing nationalist party, followed closely with 491 seats.

The treatment is having a pro-Islamist mayor in a contested election. In my main analysis, pro-Islamist mayor corresponds to having a mayor from the AKP. However, two other parties can be classified as pro-Islamist: the Welfare Party (SP), and the Great Union Party (BBP). In the main analysis, I use municipalities where AKP was ranked first or second. I exclude municipalities where AKP won or lost to one of the other pro-Islamist parties.²¹ As a robustness check, I consider two alternative scenarios: AKP against another pro-Islamist party (N=259), and any of the three pro-Islamist parties against a secular party (N=2,321). Results from these cases are consistent with the main results, and are included in the appendix.

In 2,276 municipalities, AKP was ranked first or second. I construct threshold dummies for the AKP win margin, defined as the difference in the share of votes between AKP and the largest secular party. Voter fragmentation produces many contested elections. Results are reported in Table 1 for win margins of 2, 5 and 10 percent. This table provides an overview of how 'close' the elections were.

The main outcome variable is the share of female employees within the municipal government. Administrative data on municipal employees come from two different sources: data on workers from the Ministry of Labor, and data on civil servants from the Social Security Institute.²² Both datasets are based on social security records and hence cover the entire population of municipal personnel. It is

¹⁹I also use data on 2004 Local Elections from the same source to control for incumbency.

²⁰Votes for independent candidates are pooled, and therefore not considered here.

²¹Also with AKP there is alignment at the local and national levels, hence adding these two parties would contaminate the analyses.

²²Since the recruitment flexibilities and job qualifications differ for workers and civil servants, I conduct separate analyses with each outcome variable.

a challenging task to obtain administrative data on Turkish labor market.²³ Data is not available prior to 2009. This restricts my analysis to 2009 elections.²⁴ This data reports the stock of personnel in each municipality by gender at several points in time from 2009 to 2015 (quarterly for workers and yearly for civil servants). An important weakness of the data is that there is no information on hires, fires, and quits. Although this study only considers civil servants and permanent workers due to data limitations, it is nevertheless informative on the general public sector since employment standards are similar to those of civil servants.

In order to avoid preferential treatments in municipal recruitment, the state council decided in 2010 to centralize the appointment of municipal civil servants. This caused municipal recruitments to stall. This study considers municipal recruitment before this change became effective.

Data on all covariates are at municipality level, and come from different datasets: the Address Based Population Register, and National Education Statistics Database of the Turkish Statistical Institute (TurkSTAT).²⁵ Demographic characteristics include municipality-level averages of population and distribution of age groups, education statistics (literacy rate and completed schooling) by gender, and the proportion of never-married females between ages 15-30.²⁶ Data on municipality characteristics come from the year 2008. Table 2 reports summary statistics for the municipalities used in the analysis. In the last column, where the sample is restricted to a 10 % victory margin, the differences become milder. The pro-Islamist party, AKP, is more likely to govern localities where the share of educated population is lower, and in less populated regions. Moreover, the share of female personnel (both blue and white-collar) is lower in municipalities governed by the AKP.

Matching municipalities across datasets and over time is an intricate task. The names of a significant portion of municipalities have been misspelled in social security records, and some municipalities have two names, where the other

²³Personnel data has been prepared specifically for this study by these institutions. Municipality-level personnel data has been aggregated from individual social security records, by extracting the municipality names from work places.

²⁴The subsequent local election in 2014 is not favorable for Regression Discontinuity Design due to small observation size. With the municipal reshuffling, the number of municipalities were halved between 2009 and 2014 elections. This municipal reform is explored in ongoing work.

²⁵All data have been prepared by the TurkSTAT at municipality level upon request.

²⁶Data on labor market characteristics are not available.

one is used in different datasets. Moreover, municipalities have changed over time, so it is necessary to track municipalities that changed when merging datasets from different years.²⁷

5 Mayor Effect

5.1 OLS Results

The baseline empirical specification is as follows:

$$y_i = \alpha + \beta M_i + \epsilon_i$$

$$M_i = \begin{cases} 1, & \text{Islamist (AKP) mayor} \\ 0, & \text{Secular mayor} \end{cases}$$

The outcome variable is the share of women employed in the municipal government in 2010. $M_i = \mathbb{1}\{x_i \geq c\}$ denotes assignment to treatment. Treatment status is 1 if AKP won the election; and 0 otherwise.

Ordinary Least Squares (OLS) results do not imply causation in this setting, but are useful for exploring the patterns in the raw data. Table 3 reports results from unconditional and conditional OLS estimates of an AKP mayor on the share of female employees. Having a mayor from the religious party is negatively related to the share of females working in the municipal government. Including covariates weakens the effect for both blue and white-collars, while the negative relationship remains significant in the case of blue-collars. In columns 3 and 6, I restrict the sample of analysis to AKP win margin ≤ 0.10 . Running OLS with observations near the threshold further neutralizes the role of unobservable factors, and indeed, all significant effects disappear.

²⁷I use information from <http://www.yerelnet.org.tr/belediyeler/> and General Directorate of Local Authorities (<http://www.migm.gov.tr/MahalliIdareler.aspx>) to manually match data from these sources.

5.2 Regression Discontinuity Design

The main challenge in recovering causal effects of Islamist political rule is that municipalities more favorable of Islamist parties tend to exhibit more conservative characteristics (that are unobserved) regarding women’s roles; and women are less likely to be employed in these areas. To overcome this endogeneity problem, I implement Regression Discontinuity (RD) design to exploit exogenous variation in having a democratically elected Islamist mayor (from the AKP) in close races. The ‘Ideal Experiment’ would randomly assign religious or secular mayors to municipalities and observe whether they choose to employ women. The identification strategy emulates a quasi-natural experiment where municipalities are randomly treated with a pro-Islamist or a secular mayor, i.e., a political shock.

The empirical specification for the RDD is as follows:

$$y_i = \alpha + \beta M_i + f(x_i) + \epsilon_i \quad \forall x_i \in (c - h, c + h)$$

The running variable x_i is the difference in the vote share of the largest Islamist party (AKP) and the vote share of the largest secular party. Naturally this variable varies between 1 and -1, with the cutoff score being equal to 0. $f(x_i)$ is a continuous function of the running variable, $c = 0$ is the threshold, and h is the bandwidth around the threshold. Treatment status M_i is 1 if AKP won the election within a small win margin determined by h ; and 0 otherwise. This setup corresponds to a sharp RDD, where the treatment jumps discontinuously from 0 to 1 as the AKP win margin crosses the 0 cutoff.

As the benchmark model, I implement the bias-corrected estimator with robust confidence intervals, proposed by Calonico et al. [2014].²⁸ The bias-corrected RD estimator by Calonico et al. [2014] corrects the RD estimator for bias introduced by including observations away from the threshold, and constructs confidence intervals that are robust to bandwidth choice.

The baseline RD regression equation for local linear RD is formulated as be-

²⁸Choice of the regression model in RDD is not straightforward. Imbens and Lemieux [2008] provide a detailed comparison of parametric and non-parametric methods in RDD. Hahn et al. [2001] propose a strategy to combine both approaches: the use of local linear regressions. This method has become the most common practice in recent work; and is also the main method in Meyersson [2014].

low.²⁹ We are interested in the effect of the treatment M_i at the cutoff, which is given by β_1 (since $x_i = 0$ at the cutoff).

$$y_i = \alpha + \beta_1 M_i + \beta_2 M_i x_i + \beta_3 x_i + \epsilon_i$$

To establish the stability of RD findings, I conduct various sensitivity analyses with different bandwidths and specifications of the control function.

5.2.1 Validity of RD

I proceed with some standard validity checks for RD (Imbens and Lemieux [2008]). The identifying assumption states that Islamist preferences of municipalities are continuous around the threshold. A slight advantage of RDD is the possibility to test this assumption explicitly. Figure 1 plots the density of mayoral elections by AKP win margin, providing a test for discontinuity in the density of the running variable around the cutoff with the McCrary density test (McCrary [2008]). The discontinuity estimate suggests that there is no significant jump in the density of the running variable.

A critical assumption of RD is that municipalities where the Islamist party barely won or lost should have the same characteristics on average, so that the estimated effect can be attributed to the treatment. Technically, this corresponds to all covariates being continuous around the threshold. Figure 2 presents balanced covariate checks to inspect the control variables at the discontinuity. Table 4 shows that there is no discontinuity in covariates, and the p-value from a Seemingly Unrelated Regressions (SUR) test of joint significance is not significant. This confirms that I have appropriate counterfactuals for the municipalities treated with an AKP mayor. Figure 3 shows that pre-treatment outcomes are balanced, further supporting the identification strategy (see Lee and Lemieux [2010]).

5.2.2 RD Results

I begin with a graphical illustration of RD results. Figure 4 displays sample means of the outcome variables against the AKP win margin, using the full band-

²⁹This is the pooled regression, where regression is allowed to differ on both sides of the cutoff point, by adding interaction terms between M and x (Lee and Lemieux [2010]).

width.³⁰

Share of females among blue and white-collar (in 2010) is plotted against AKP win margin in 2009 elections. The red line marks the cutoff at zero. On the right side of the threshold, the municipality is treated with an Islamist mayor, on the left side, with a secular mayor. A local polynomial is fitted to the data on each side of the cutoff. The outcomes are continuous around the threshold, illustrating a null treatment effect.

Table 5 presents the results from RD regressions using the Calonico et al. [2014] bias-corrected estimator and robust confidence intervals. In the top panel, the outcome is the female share among blue-collar in 2010; and in the bottom panel, the outcome is the female share among white-collar in 2010. Models (1) and (2) present local linear RD results without covariates, estimated using different windows around the cutoff. Models (3), (4) and (5) adjust for covariates, with linear, quadratic, and cubic control functions of the forcing variable.

Overall, results indicate that having a mayor from the pro-Islamist party had no statistically significant impact on the gender composition of employees in the municipality; and this result is robust to specification and bandwidth choice. Next section contemplates possible mechanisms that might explain the results. Appendix A2 documents evidence from further analyses using absolute seat majority in the municipal council as treatment.

5.3 Mechanisms

Does the null treatment effect of Islamist mayor imply ‘no discrimination’? I test two possible mechanisms to address this question. First, I consider a positive effect of the Islamist mayor on employment of pious women. Next, I discuss potential selection bias in the RD sample of competitive municipalities.

Meyersson [2014] shows that local Islamist political rule increases female education by making education more accessible to the pious: by neglecting the ban on headscarves, and increasing the number of religious education institutions. The headscarf ban is a direct barrier in employment, as well as in education, for reli-

³⁰Smooth global polynomial regression curves estimated separately for control and treatment units are added to the graph. The `rdplot` package by Calonico et al. [2014] selects the optimal bin length and optimal number of bins, I use the default: evenly spaced mimicking-variance bins, which approximate the underlying variability of the raw data.

gious Turkish women. I consider an extension of this mechanism to employment, and test whether the Islamist mayor can provide employment opportunities for women wearing headscarves. Until 2013, government workers were not able to cover their heads in working places. However, anecdotal evidence suggests that despite the ban, AKP-led municipalities allowed their female employees to wear headscarves in public offices.³¹ The headscarf then becomes a mechanical channel, since women with headscarves cannot work in a municipality unless it is governed by an Islamist mayor. If Islamist mayors discriminate against women, but allow women with headscarves to come to work, this partly compensates for discrimination for a certain fraction of the society.³²

I use data from a nationally representative survey by KONDA from the year 2008, which includes a question on head covering for women.³³ The survey also includes political and religiosity preferences along with various measures of lifestyle. Table 6 provides an overview of the data. Among 874 districts, 414 of them are matched with the KONDA sample.³⁴ I aggregate individual survey data at district level and compute the share of women wearing headscarves, the share of housewives, the share of individuals who consider themselves as religious, and share of individuals that report voting for the AKP in the 2007 elections.³⁵

To examine favoritism towards religious women, I use as proxy the share of women covering their heads (among the constituents of that district).³⁶ The sample is split below and above median share of women wearing headscarves at the 10 % RD threshold.³⁷ The results displayed in Table 7 suggest that the mayor effect does not operate through the headscarf channel. The null treatment effect of the Islamist mayor remains regardless of the share of women with headscarves.

³¹See Daily Nation [2013] and BirGün [2008].

³²There is anecdotal evidence that AKP mayors discriminated against female employees without headscarves.

³³KONDA is a Turkish company that conducts research on public opinion and provides consultancy. Data was provided upon request.

³⁴Sample selection is not an issue, since matching probability does not jump discontinuously at the treatment threshold.

³⁵Municipalities are nested in districts.

³⁶Note that the share of women wearing headscarves refers to the share of women interviewed living in that district. The ideal data to explore this channel would be the share of women wearing headscarves among those employed in the municipalities. I assume that the municipal employees are a representative sample of the women living in those municipalities.

³⁷I repeat the analysis for share of housewives and share of religious people, and do not find heterogeneous treatment effects.

Another possible explanation for the null treatment effect is different characteristics of swing municipalities. One could argue that in swing municipalities, the Islamist candidates cannot win the election if they are anti-women, and hence need to be more moderate. If municipalities in close elections are genuinely different from the others, the RD estimator is biased downwards in absolute terms. Municipalities with contested elections are likely to be different, and a zero treatment effect for marginal municipalities does not imply zero treatment effect for inframarginal municipalities. RD provides a local average treatment effect (LATE), which is cleanly identified near the threshold. This is potentially different than the average treatment effect (ATE).

Few recent studies have considered estimation of treatment effects beyond the RD threshold, which requires stronger identification assumptions. In particular, Angrist and Rokkanen [2015] develop an identification strategy based on RD-specific conditional independence assumptions on potential outcomes.³⁸ Angrist and Rokkanen [2015] argue that, conditional on other predictors of the dependent variable, the running variable can be ignored. The average treatment effect is then identified by a matching-style estimand. Hainmueller et al. [2015] adapt this method from Angrist and Rokkanen [2015] to estimate incumbency effects. I follow closely the methodology used in Hainmueller et al. [2015].

The method amounts to using additional covariates to estimate counterfactuals for inframarginal observations. The treatment status should be independent of the running variable, conditioning on the set of controls, i.e.,

$$E[Y_{ji}|r_i, X_i] = E[Y_{ji}|X_i] \quad j = 0, 1$$

where r_i is the running variable, X_i is the set of controls, and j is the treatment status.

In the RD framework, the conditional independence assumption (CIA) offers explicitly testable implications. We have to resort to two assumptions (Angrist and Rokkanen [2015]):

1. Potential outcomes are mean-independent of the running variable conditional on the set of controls, X_i .

³⁸Proposed method is applied to estimate the effects of elite school attendance in Boston on inframarginal applicants.

2. X_i predicts treatment status.

I use a weaker version, Bounded CIA (BCIA), which requires the CIA to hold in a specified neighborhood of the cutoff. This method reduces bias by ensuring that we do not extrapolate too far from the RD cutoff.

To test the BCIA, a simple regression-based procedure is followed. I regress outcomes on the set of controls and the running variable on either side of the cutoff. If there's any sort of dependence between the outcome and the running variable, CIA is violated. Table 8 validates the CIA assumption, using two different sets of control variables. First set of covariates include both election and demographic characteristics, while the second set only includes election characteristics. The CIA tests are satisfied for both sets of controls within a window as large as 40%.

Following Hainmueller et al. [2015], I employ three methods of estimation: OLS, Matching (one-to-one nearest neighbor matching which relaxes the linearity assumption) and Entropy Balancing (imposing exact balance on first moments of the control variables), within the bounds where the CIA holds.³⁹

Table 9 presents the treatment effect in less competitive municipalities. The null treatment effect (of Islamist mayor on gender composition of municipal employees) is robust to extrapolation from the RD cutoff. The results are robust to different sets of covariates, and different windows around the cutoff. Findings suggest that pro-Islamist mayors from the AKP do not have anti-working-woman bias when choosing employees.

5.4 Incumbent Effect

To get a deeper insight, I divide the data into subsamples with respect to incumbency status. Matrix below outlines the different subsamples. There are two main subsamples: AKP-incumbent subsample, and secular-incumbent subsample.⁴⁰ For municipalities where AKP is the incumbent party, Sample 1 (S1) is the treatment sample and Sample 2 (S2) is the control sample. Likewise, for munic-

³⁹Entropy balancing matches the covariate means of treatment and control groups on first moments, and reweights the control sample, so that the means in the reweighted control group match the means in the treatment group. Difference-in-means between the treatment group and the reweighted control group yields an ATE.

⁴⁰I exclude municipalities where one of the two small pro-Islamist parties was the incumbent, since they are also excluded from the treatment.

ipalities where incumbent is a secular party, Sample 3 (S3) is the treated sample, and Sample 4 (S4) is the control group.

Transition Matrix with Winning Party

S1	S2
AKP → AKP	AKP → Other
S3	S4
Other → AKP	Other → Other

RD validity tests for subsamples are included in Appendix A3. Table 10 presents RD results of the Islamist mayor effect on the employment outcomes. This table represents results from local linear RD regressions without covariates, with standard errors clustered at the district level. Columns refer to the sample with AKP incumbent, and secular incumbent, respectively. There is a negative Islamist mayor effect on the share of females among white-collars in municipalities where the AKP replaced another party by a small victory margin. This implies a corresponding counter-acting positive secular mayor effect in municipalities where a secular party remained in power, barely winning against AKP. I do not detect any significant mayor effect on blue-collars; or in places where AKP was the incumbent party. Figure 5 illustrates the mayor effect for the municipalities with a secular incumbent.

Why does the negative mayor effect prevail only conditioning on the incumbent type? There are two possible explanations. First, mayors from the AKP have already established a path dependency in the previous elections.⁴¹ Hence, in the constituencies where they are already in power, policy changes are not observed in 2010. Moreover, municipalities that switched from a non-AKP mayor to an AKP mayor are subject to a double treatment: one of Islamist mayor, and another of central-local government alignment.⁴² This implies increased access to resources and smoother implementation of preferred policies. Hence, power of the mayor is enhanced by support from the central government.

Note that the observed treatment effect on white-collars can be an outcome of layoffs, as well as quits. ‘Secular’ women may sort themselves by quitting their

⁴¹It is not possible to investigate the mayor effect for 2004 elections with the existing data.

⁴²AKP is the single-party heading the central government.

jobs once an Islamist mayor comes to power. To distinguish between demand and supply effects, I allow for heterogeneous RD effects for different demographic characteristics. The sample is split above and below the median of the following characteristics: education measured as high school completion rate, female education measured as high school completion rate among females, literacy rate (to proxy for the level of development), municipality size measured by population, and share of Islamist votes (for the AKP).

Table 11 demonstrates these results for subsamples 3 and 4 (with a secular incumbent). The observed mayor effects are driven by municipalities with higher literacy rate, and a higher share of AKP votes. There is a decrease (increase) in the share of females among white-collars in municipalities where an Islamist mayor replaced a secular mayor (the mayor remained secular). The evidence is consistent with a movement of female white-collars from Islamist to secular municipalities. Given the negative correlation between Islamist votes and education levels within a constituency, these results may be explained by voluntary or involuntary displacements. The data is not informative about the form of job separation. Ideally, one needs data on employment flows to pin down the exact nature of the observed effects. Nevertheless, a mayor effect still significantly influences the presence of women in the workplace. This finding should be extended by future research: by further exploration of the supply and demand effect using more refined data.

6 Discussion

Based on evidence from the media on the attitude of pro-Islamist AKP politicians in Turkey towards working women, the expected result is a negative treatment effect, suggesting that the Islamist mayor discriminates against female employees. While I detect no overall effect of an Islamist mayor on municipal employees; conditioning with respect to the incumbent type reveals the true effect. The share of females among white-collars is lower in municipalities that switched to the religious party; and higher in municipalities that remained with a secular party. Heterogeneity analyses suggest that this might be a result of a flow of 'secular' females from religious to secular institutions.

This can be perceived as a segregation result, where female employees end up in a municipality that is headed by a mayor of the same type, religious or secu-

lar. This can be an efficient allocation if similar types are more productive working together. One potential cost of segregation is implementation of differential policies across municipalities, and reinforcement of religiously conservative values in public institutions in municipalities with religious types.

External validity should be discussed in two dimensions. First, the analyses presented in this paper use data from municipal employees. While it is argued that the municipal employees considered in this paper are similar to civil servants in other public institutions; we can not extend the results to all public institutions. Next, the reader should keep in mind that being one of the few Muslim democracies, Turkey is a special case. While this unique setting provides an experimental ground to examine the effects of Islamist political rule, it does not automatically generalize to other Muslim countries.

7 Tables and Figures

Table 1: Close Races

Win Margin:	All	$\leq 10\%$	$\leq 5\%$	$\leq 2\%$
AKP wins	967	566	335	156
AKP losses	1,309	647	343	136

Number of municipalities that the AKP won and lost the election by the specified margin.

Table 2: Summary Statistics

	All	AKP	Non-AKP	Diff.	Diff. (< 0.10)
<i>Outcomes: Share of Female Employees (2010)</i>					
Blue-collars	0.054	0.048	0.063	-0.015***	-0.013*
White-collars	0.084	0.076	0.094	-0.018**	-0.011
<i>Covariates</i>					
AKP vote share	0.436 (0.112)	0.487 (0.101)	0.366 (0.085)	0.121*** (0.004)	0.047*** (0.004)
Voter Turnout	0.889 (0.077)	0.887 (0.080)	0.891 (0.073)	-0.004 (0.003)	0.002 (0.004)
Number of Parties	5.102 (2.020)	5.047 (2.031)	5.177 (2.003)	-0.130 (0.086)	-0.059 (0.113)
log(Population)	8.362 (1.415)	8.283 (1.401)	8.468 (1.427)	-0.185** (0.060)	-0.106 (0.075)
Pop. share 20-59	0.532 (0.055)	0.530 (0.051)	0.535 (0.060)	-0.005* (0.002)	-0.004 (0.003)
Pop. share above 60	0.138 (0.064)	0.140 (0.064)	0.134 (0.064)	0.006* (0.003)	0.004 (0.004)
Ratio never-married	0.662 (0.139)	0.663 (0.135)	0.661 (0.145)	0.003 (0.006)	-0.004 (0.008)
Literacy Rate	0.808 (0.092)	0.809 (0.090)	0.807 (0.095)	0.002 (0.004)	-0.003 (0.005)
High School-Females	0.092 (0.060)	0.087 (0.055)	0.098 (0.065)	-0.011*** (0.003)	-0.009** (0.003)
High School-Males	0.169 (0.070)	0.166 (0.069)	0.173 (0.070)	-0.007* (0.003)	-0.009* (0.004)
Town (0,1)	0.205 (0.404)	0.197 (0.398)	0.216 (0.412)	-0.019 (0.017)	-0.020 (0.024)
District Center (0,1)	0.768 (0.422)	0.777 (0.416)	0.756 (0.430)	0.022 (0.018)	0.016 (0.025)
Metropolitan (0,1)	0.027 (0.162)	0.026 (0.158)	0.028 (0.166)	-0.003 (0.007)	0.004 (0.009)

Columns 1-3 report means and standard deviations for the entire sample, AKP municipalities (treated), and non-AKP municipalities (control). Columns 4 and 5 report difference in means between the treated and control municipalities for the entire sample, and for AKP win margin < 0.10. These mean-differences correspond to the naive estimators of the Average Treatment Effect (ATE) and the Local Average Treatment Effect (LATE). ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

Table 3: Mayor Effect - OLS Results

	Share of Female Employees (2010)					
	Blue-collars			White-collars		
	(1)	(2)	(3)	(4)	(5)	(6)
Islamist mayor	-0.015*** (0.004)	-0.008** (0.004)	-0.008 (0.005)	-0.018*** (0.006)	-0.005 (0.007)	-0.004 (0.008)
Outcome mean	0.054	0.054	0.051	0.084	0.084	0.079
Obs.	1926	1909	1005	2084	2072	1106
Covariates	No	Yes	Yes	No	Yes	Yes

OLS results for the treatment effect of an Islamist mayor (from the AKP) in 2009 on the share of female employees in 2010 among blue-collars (columns 1-3) and white-collars (columns 4-6). Columns 2,3,5,6 report results from models with covariates. Covariates include AKP vote share, turnout, logged population, share of working age population, marriage ratio, literacy rate, and relative education (females/males). All standard errors are clustered at the district level. Columns 3 and 6 restrict the AKP win margin to a window of 10% on each side. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

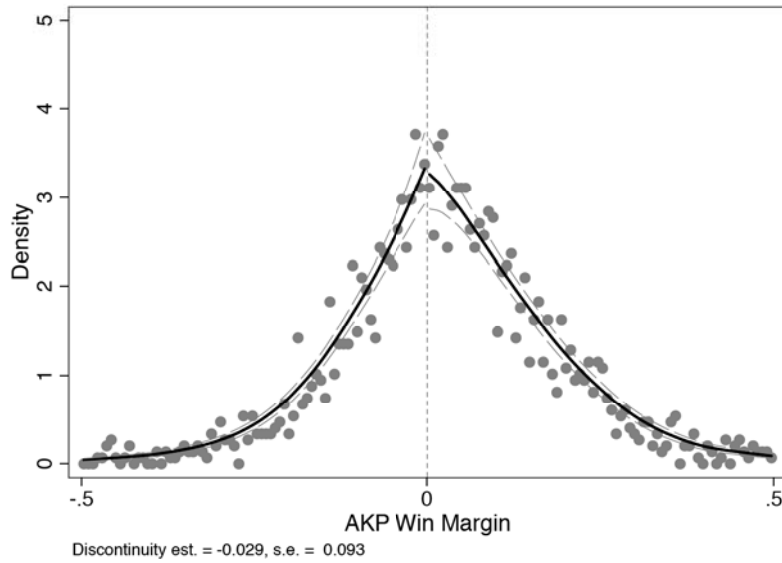


Figure 1: Density of the Running Variable. McCrary Density Test (McCrary [2008]) shows that there is no significant jump in the density of the running variable at the RD threshold.

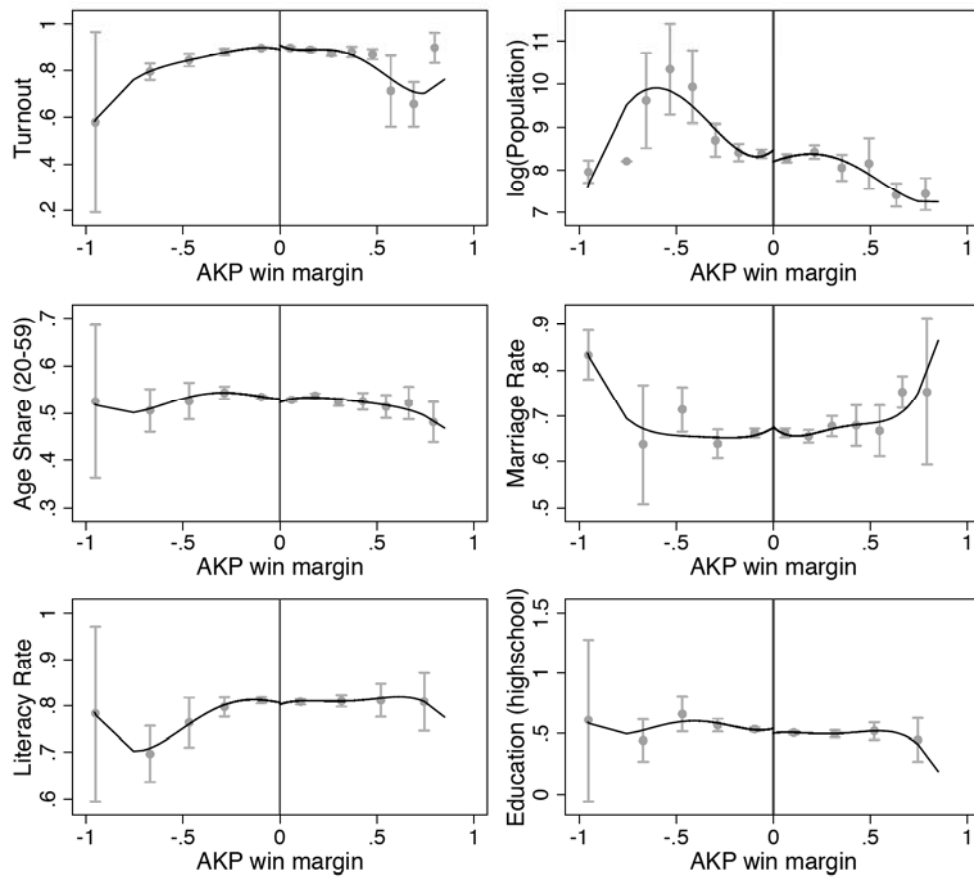


Figure 2: Covariate Balancing. Graphical illustration of the continuity of covariates around the RD threshold. Unconditional means of covariates in bins are displayed on either side of the threshold. Graphs are produced using the 'rdplot' package by Calonico et al. [2014]. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. The ticks show 95% confidence intervals.

Table 4: Placebo Regressions for Covariates

	AKP Vote Share	Turnout	log(Population)	Age share (20-59)
Islamist mayor	0.003 (0.009)	0.005 (0.009)	-0.125 (0.148)	0.002 (0.007)
Obs.	1629	1344	1644	1364
Bandwidth	0.16	0.12	0.17	0.12
	Ratio never-married	Literacy Rate	High School Completion (female/male)	
Islamist mayor	-0.001 (0.016)	0.000 (0.011)	0.001 (0.030)	
Obs.	1480	1460	1278	
Bandwidth	0.14	0.14	0.11	
p-value(SURE) = 0.777				

Test for discontinuity in covariates at the threshold, using covariates as outcome variables. RD regressions are estimated using the optimal bandwidth and robust confidence intervals calculated by the 'rdrobust' command in STATA (Calonico et al. [2014]). Bias-corrected robust standard errors are reported in parentheses. p-value from a joint test of significance of Seemingly Unrelated Regressions is reported at the bottom. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

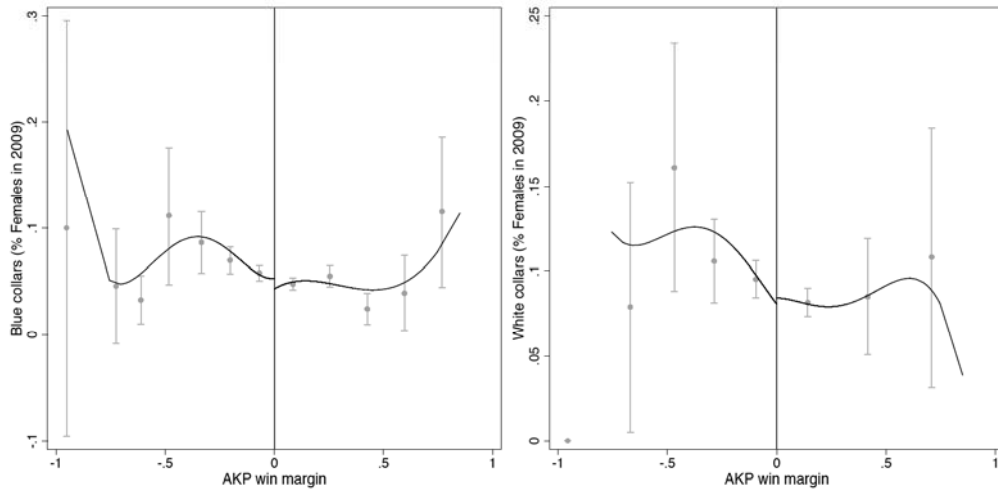


Figure 3: Pre-Treatment Outcomes. Pre-election share of female employees (blue and white-collar) are plotted against AKP win margin in 2009. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. Ticks indicate the 95% confidence intervals. Graphs are plotted using the 'rdplot' package by Calonico et al. [2014].

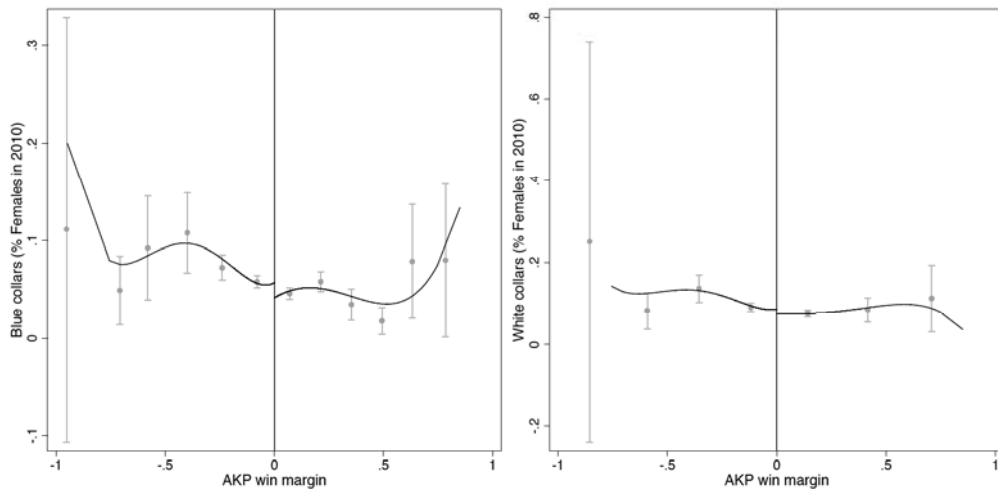


Figure 4: Mayor Effect. Share of female employees among blue and white-collar in 2010 are plotted against AKP win margin in 2009. Graphs show unconditional means in bins on either side of the threshold. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. Ticks indicate the 95% confidence intervals. Graphs are plotted using the 'rdplot' package by Calonico et al. [2014].

Table 5: Mayor Effect - RD

Share of Female Employees (2010)					
Panel A: Blue-Collars					
	(1)	(2)	(3)	(4)	(5)
Islamist mayor	0.000	-0.026	0.004	0.005	0.003
Robust se	(0.011)	(0.025)	(0.010)	(0.011)	(0.012)
Obs.	980	281	980	1353	1554
Bandwidth	0.10	0.02	0.11	0.17	0.20
Order of local pol.	1	1	1	2	3
Covariates	No	Yes	Yes	Yes	Yes
Panel B: White-Collars					
	(1)	(2)	(3)	(4)	(5)
Islamist mayor	-0.003	0.016	0.000	-0.005	-0.009
Robust se	(0.014)	(0.032)	(0.013)	(0.016)	(0.019)
Obs.	1559	541	1559	1556	1678
Bandwidth	0.17	0.04	0.17	0.21	0.22
Order of local pol.	1	1	1	2	3
Covariates	No	Yes	Yes	Yes	Yes

Causal effects of Islamist mayor on the share of female employees for blue-collars are displayed in Panel A; for the white-collars displayed in Panel B. RD regressions are estimated using the optimal bandwidth and robust confidence intervals calculated by 'rdrobust' in STATA (Calonico et al. [2014]). In column 2, I experiment with a slightly smaller bandwidth, obtained by dividing the optimal bandwidth by 4. All standard errors are clustered at the district level. Estimates are robust to optimization of the bandwidth separately on each side of the cutoff. Column 1 shows results without covariates, columns 2-5 with covariates. Covariates include AKP vote share, turnout, logged population, share of working age population, marriage ratio, literacy rate, and relative education (females/males). Columns 1-3 report results from local linear regressions. Columns 4 and 5 include a quadratic and cubic control function of the running variable. Bias-corrected robust standard errors are reported in parentheses. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

Table 6: Descriptive Statistics from KONDA data

	Mean	sd	Obs.
Share of women wearing headscarf	0.701	(0.222)	414
Share of housewives	0.700	(0.197)	414
Share religious	0.683	(0.184)	414
Share voted for AKP in 2007	0.358	(0.203)	414

Summary statistics from KONDA survey data. All data are aggregated at district level.

Table 7: Heterogeneity analysis with KONDA data

	Share of Female Employees (2010)			
	Blue-collars		White-collars	
	Below median	Above median	Below median	Above median
Islamist mayor	-0.024	-0.009	-0.051	-0.044
Robust se	(0.046)	(0.045)	(0.072)	(0.065)
Obs.	99	99	104	107
Bandwidth	0.10	0.10	0.10	0.10

RD analysis conducted separately for subsamples with below and above median share of women wearing headscarves. All data are aggregated at district level. Columns 1-2 report results for the share of females among blue-collars; columns 3-4 for white-collars. Local linear RD specification is used. AKP win margin is fixed to a window of 10% due to sample size restrictions. All calculations are made using the 'rdrobust' package by Calonico et al. [2014]. Bias-corrected robust standard errors are reported in parentheses. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

Table 8: Conditional Independence Tests

	Control Set 1		Control Set 2	
	D=0	D=1	D=0	D=1
Share of Female Employees (2010)				
Panel A: Blue-collars				
AKP win margin	-0.000 (0.018)	0.011 (0.018)	0.003 (0.019)	0.015 (0.018)
Bandwidth	0.40	0.40	0.40	0.40
Obs.	626	930	629	941
Panel B: White-collars				
AKP win margin	0.004 (0.030)	0.031 (0.023)	-0.002 (0.030)	0.037 (0.023)
Bandwidth	0.40	0.40	0.40	0.40
Obs.	691	1001	694	1008

Testing the Conditional Independence assumption in RD using simple regression-based tests. The outcomes (share of female employees among blue and white-collars) are regressed on different sets of covariates, and the running variable. To test for the bounded CIA, the sample is restricted to a window of 40 % on each side of the threshold, the largest bandwidth for which the CIA holds. Control set 1 includes: pre-treatment outcome, turnout, pre-treatment AKP vote share and win margin, logged population, high school completion rate, high school completion (females/males), working age population share, and literacy rate. Control set 2 includes: pre-treatment outcome, turnout, AKP vote share and win margin. Columns 1 and 3 report results from the control sample, columns 2 and 4 from the sample of municipalities treated with an Islamist mayor. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

Table 9: Mayor Effect in Less Competitive Municipalities - RD away from the cutoff

	Share of Female Employees (2010)					
	Blue-Collars			White-Collars		
Panel A: Control Set 1						
	OLS	Matching	Weighted	OLS	Matching	Weighted
Islamist mayor	-0.003 (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.005 (0.003)	-0.003 (0.003)	-0.004 (0.003)
Obs.	1556	1556	1556	1692	1692	1692
Bandwidth = 0.40						
Islamist mayor	-0.003 (0.002)	-0.002 (0.003)	-0.003 (0.002)	-0.005 (0.003)	-0.003 (0.003)	-0.004 (0.003)
Obs.	1490	1490	1490	1622	1622	1622
Bandwidth = 0.30						
Islamist mayor	-0.004 (0.002)	-0.003 (0.003)	-0.004 (0.002)	-0.007 (0.004)	-0.004 (0.004)	-0.006 (0.004)
Obs.	1306	1306	1306	1411	1411	1411
Bandwidth = 0.20						
Panel B: Control Set 2						
	OLS	Matching	Weighted	OLS	Matching	Weighted
Islamist mayor	-0.003 (0.002)	-0.004 (0.003)	-0.002 (0.002)	-0.005 (0.003)	-0.003 (0.004)	-0.004 (0.004)
Obs.	1570	1570	1570	1702	1702	1702
Bandwidth = 0.40						
Islamist mayor	-0.002 (0.002)	-0.004 (0.003)	-0.001 (0.002)	-0.004 (0.004)	-0.005 (0.004)	-0.004 (0.004)
Obs.	1504	1504	1504	1632	1632	1632
Bandwidth = 0.30						
Islamist mayor	-0.003 (0.002)	-0.003 (0.003)	-0.003 (0.002)	-0.006 (0.004)	-0.006 (0.004)	-0.006 (0.004)
Obs.	1316	1316	1316	1418	1418	1418
Bandwidth = 0.20						

Columns 1 and 4 display OLS results, columns 2 and 4 display results from one-to-one nearest neighborhood matching, columns 3 and 6 from weighted regression, for the share of females among blue and white-collars respectively. Weights in columns 3 and 6 are obtained using entropy balancing. Panel A shows results with the first set of controls, Panel B with the second set of controls. Control set 1 includes: pre-treatment outcome, turnout, pre-treatment AKP vote share and win margin, logged population, high school completion rate, high school completion (females/males), working age population share, and literacy rate. Control set 2 includes: pre-treatment outcome, turnout, AKP vote share and win margin ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

Table 10: Mayor Effect by Incumbent Party - RD

Share of Female Employees (2010)		
Panel A: Blue-Collars		
	AKP-incumbent	Secular-incumbent
Islamist mayor	0.002	-0.001
Robust se	(0.013)	(0.019)
Obs.	611	430
Bandwidth	0.10	0.11
Panel B: White-Collars		
	AKP-incumbent	Secular-incumbent
Islamist mayor	0.014	-0.048**
Robust se	(0.024)	(0.027)
Obs.	668	402
Bandwidth	0.10	0.09

Local linear RD estimates of the Islamist mayor effect are reported for different subsamples defined by the incumbent party. All estimations are calculated using the 'rdrobust' package by Calonico et al. [2014]. Bias-corrected robust standard errors are reported in parentheses. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

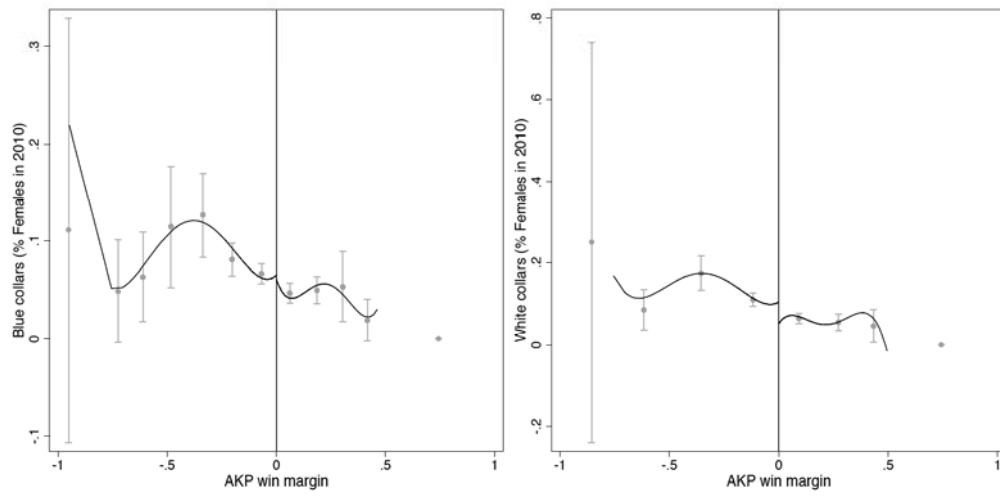


Figure 5: Mayor Effect in Subsamples 3 and 4. Share of female employees among blue and white-collar workers in 2010 are plotted against AKP win margin in 2009 for subsamples 3 (left panel), and 4 (right panel). Graphs show unconditional means in bins on either side of the threshold. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. Ticks indicate the 95% confidence intervals. Graphs are plotted using the 'rdplot' package by Calonico et al. [2014].

Table 11: Heterogeneity in Treatment Effect with Secular Incumbent

	Share of Female Employees (2010)			
	Blue-Collars		White-Collars	
	Below median	Above median	Below median	Above median
<i>by Education</i>				
Islamist mayor	0.017 (0.030)	-0.012 (0.046)	0.043 (0.068)	-0.025 (0.070)
<i>by Female Education</i>				
Islamist mayor	0.012 (0.030)	-0.007 (0.048)	-0.041 (0.063)	-0.031 (0.074)
<i>by Literacy</i>				
Islamist mayor	0.022 (0.033)	-0.016 (0.042)	0.002 (0.075)	-0.092* (0.044)
<i>by Size</i>				
Islamist mayor	0.024 (0.014)	-0.027 (0.053)	-0.069 (0.060)	-0.015 (0.063)
<i>by Islamist Votes</i>				
Islamist mayor	-0.017 (0.039)	0.006 (0.048)	-0.006 (0.057)	-0.104* (0.051)
Bandwidth	0.05	0.05	0.05	0.05
Obs.	106	107	120	120

The table shows heterogeneous RD treatment effects for the subsample with secular incumbent, by splitting the sample of observations within a bandwidth of 0.05 of the AKP win margin, at the median values of the following characteristics: education, female education, literacy, size and votes for the AKP. In the treated municipalities, the governing party switches from a secular party to the AKP. Results are robust to different bandwidths. All estimations are calculated using the 'rdrobust' package by Calonico et al. [2014]. Bias-corrected robust standard errors are reported in parentheses. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

A Appendix

A.1 Institutional Details

Table A.1: Turkish Political Roadmap

1923	Foundation of the republic of Turkey by M. K. Ataturk (single-party system)
1946	Transition to multi-party politics
1950	First change of the ruling party
1960	Military Coup d'État
1971	Military Coup d'État
1980	Military Coup d'État (Military regime until 1983) Military bans existing political parties from politics
1982	New constitution: 10 % threshold to join Parliament
1994	Local Elections: Welfare (Refah) Party wins an overwhelming majority
1998	Welfare Party is closed down by constitutional court Virtue (Fazilet) Party formed as successor
2001	AKP is formed under leadership of Erdogan Virtue Party is closed down by constitutional court
2001	Turkish Financial (Banking) Crisis
1999-2002	Unsuccessful coalition governments
2002	Landslide victory of AKP in Parliamentary Elections (35 %)
2003	Erdogan takes office as Prime Minister
2004	Local Elections with AKP as the first party (42 %)
2007	Parliamentary Elections AKP increases its vote share to 47 %
2007	Presidential Elections A. Gul (one of the founders of AKP) elected as President
2011	Parliamentary Elections where AKP got 50 % of the votes
2014	Local Elections with AKP as the first party
2014	Presidential Elections: Erdogan assumed office as President

Table A.2: Number of Municipalities by Type (2011)

Municipality Type	Count
Metropolitan Municipality	16
Metropolitan District Municipality	143
Provincial Municipality	65
District Municipality	749
Town Municipality	1,977
Total	2,950

General Directorate of Local Administrations [2010]

A.2 Classification of Pro-Islamist Parties

First, I consider municipalities where the AKP won or lost against one of the other two Islamist parties, SP and BBP. Here, the treatment is having a mayor from the AKP. Figures A.1 and A.2 present validity checks for the RDD.

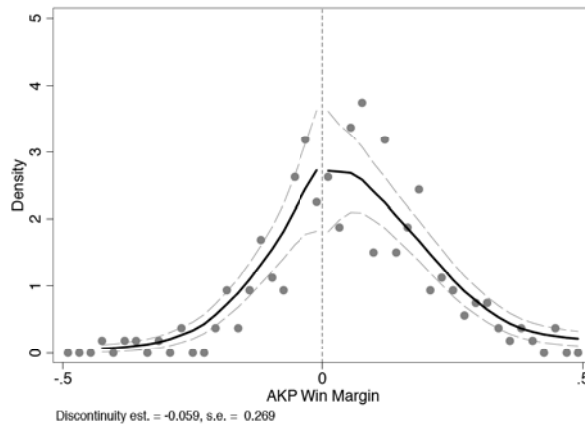


Figure A.1: Density of the Running Variable. McCrary Density Test (McCrary [2008]) shows that there is no significant jump in the density of the running variable at the RD threshold.

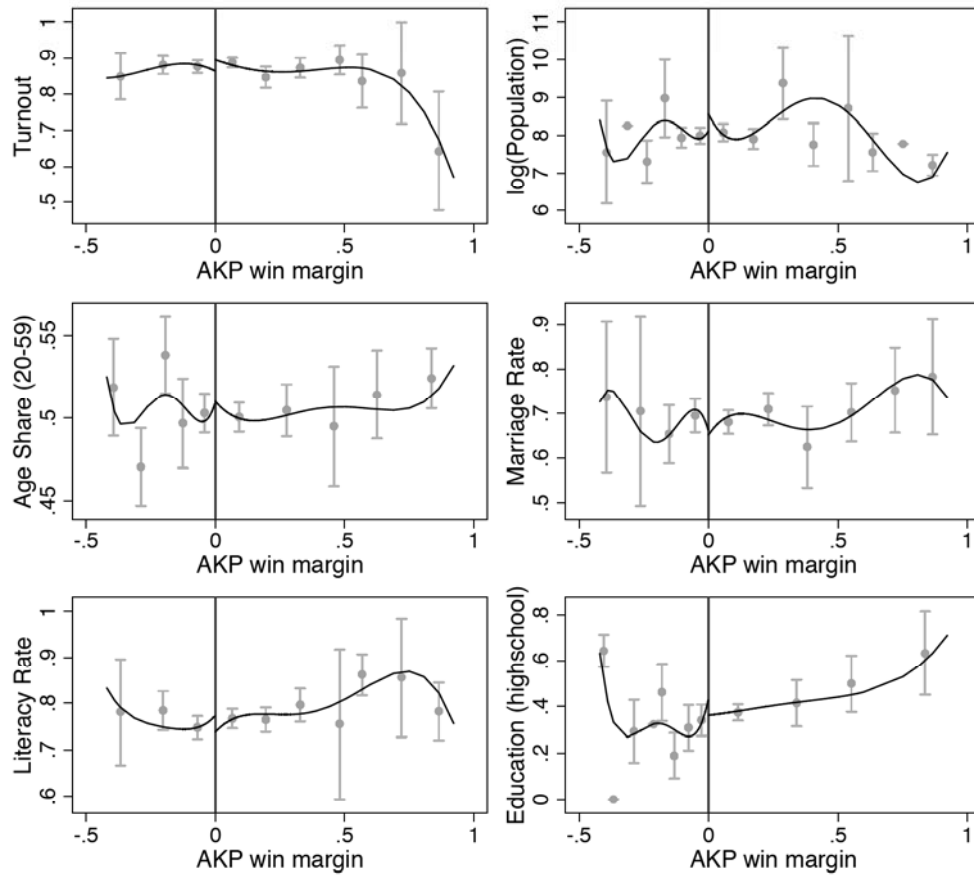


Figure A.2: Covariate Balancing for municipalities where the AKP won or lost against another pro-Islamist party. Graphical illustration of the continuity of covariates around the RD threshold. Unconditional means of covariates in bins are displayed on either side of the threshold. Graphs are produced using the 'rdplot' package by Calonico et al. [2014]. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. The ticks show 95% confidence intervals. p-value from SUR estimations is 0.837. Regression results are available upon request.

RD results mirror the main analysis, and are reported below.

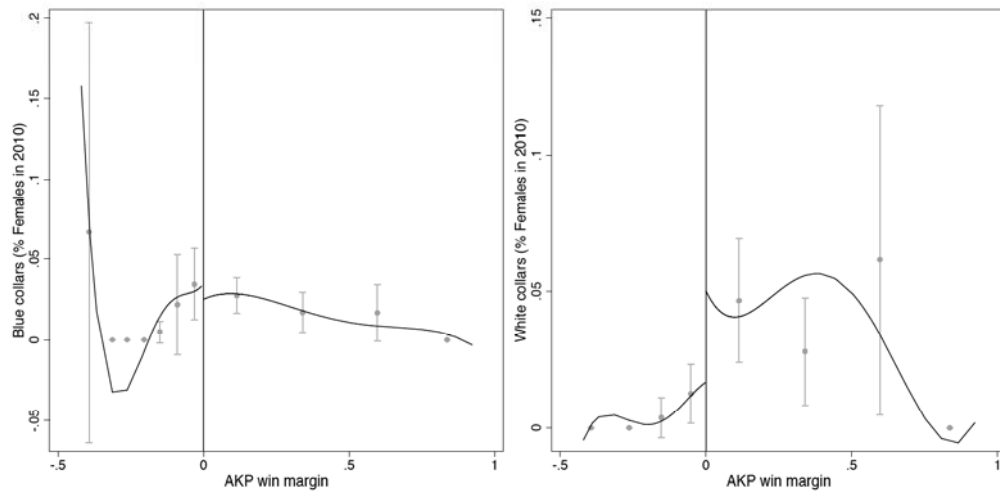


Figure A.3: Mayor Effect. Share of female employees among blue and white-collarers in 2010 are plotted against AKP win margin in 2009, when AKP won or lost to another pro-Islamist party. Graphs show unconditional means in bins on either side of the threshold. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. Ticks indicate the 95% confidence intervals. Graphs are plotted using the 'rdplot' package by Calonico et al. [2014].

Table A.3: Mayor Effect - RD

Share of Female Employees (2010)				
Panel A: Blue-Collars				
	(1)	(2)	(3)	(4)
AKP mayor	-0.002	0.005	0.013	0.012
Robust se	(0.033)	(0.029)	(0.039)	(0.042)
Obs.	93	92	105	138
Bandwidth	0.09	0.09	0.11	0.15
Order of local pol.	1	1	2	3
Covariates	No	Yes	Yes	Yes
Panel B: White-Collars				
	(1)	(2)	(3)	(4)
AKP mayor	0.038	0.039	0.043	0.024
Robust se	(0.032)	(0.032)	(0.033)	(0.027)
Obs.	137	129	178	162
Bandwidth	0.12	0.12	0.20	0.17
Order of local pol. .	1	1	2	3
Covariates	No	Yes	Yes	Yes

Causal effects of AKP mayor on the share of female employees for blue-collars are displayed in Panel A; for the white-collars displayed in Panel B. Analysis sample only includes municipalities where AKP won or lost the elections to another pro-Islamist party. RD regressions are estimated using the optimal bandwidth and robust confidence intervals calculated by ‘rdrobust’ in STATA (Calonico et al. [2014]). In column 2, I experiment with a slightly smaller bandwidth, obtained by dividing the optimal bandwidth by 4. All standard errors are clustered at the district level. Estimates are robust to optimization of the bandwidth separately on each side of the cutoff. Column 1 shows results without covariates, columns 2-5 with covariates. Covariates include AKP vote share, turnout, logged population, share of working age population, marriage ratio, literacy rate, and relative education (females/males). Columns 1-3 report results from local linear regressions. Columns 4 and 5 include a quadratic and cubic control function of the running variable. Bias-corrected robust standard errors are reported in parentheses. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

Next, I redefine treatment as pro-Islamist mayor, where the mayor is from any of the three pro-Islamist parties. Results do not change. A pro-Islamist mayor has no significant causal effect on the gender composition of employees. RD validity tests and regression results are reported below.

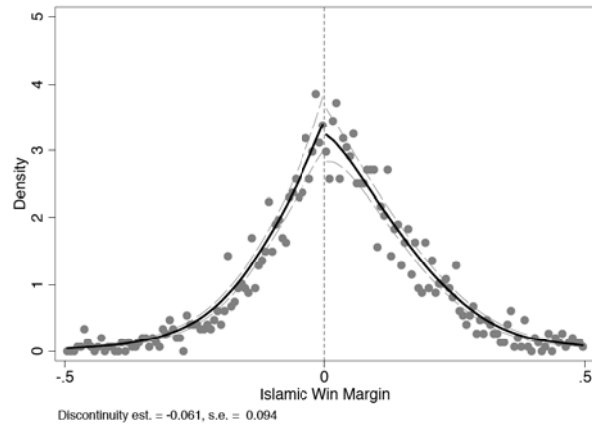


Figure A.4: Density of the Running Variable. McCrary Density Test (McCrary [2008]) shows that there is no significant jump in the density of the running variable at the RD threshold.

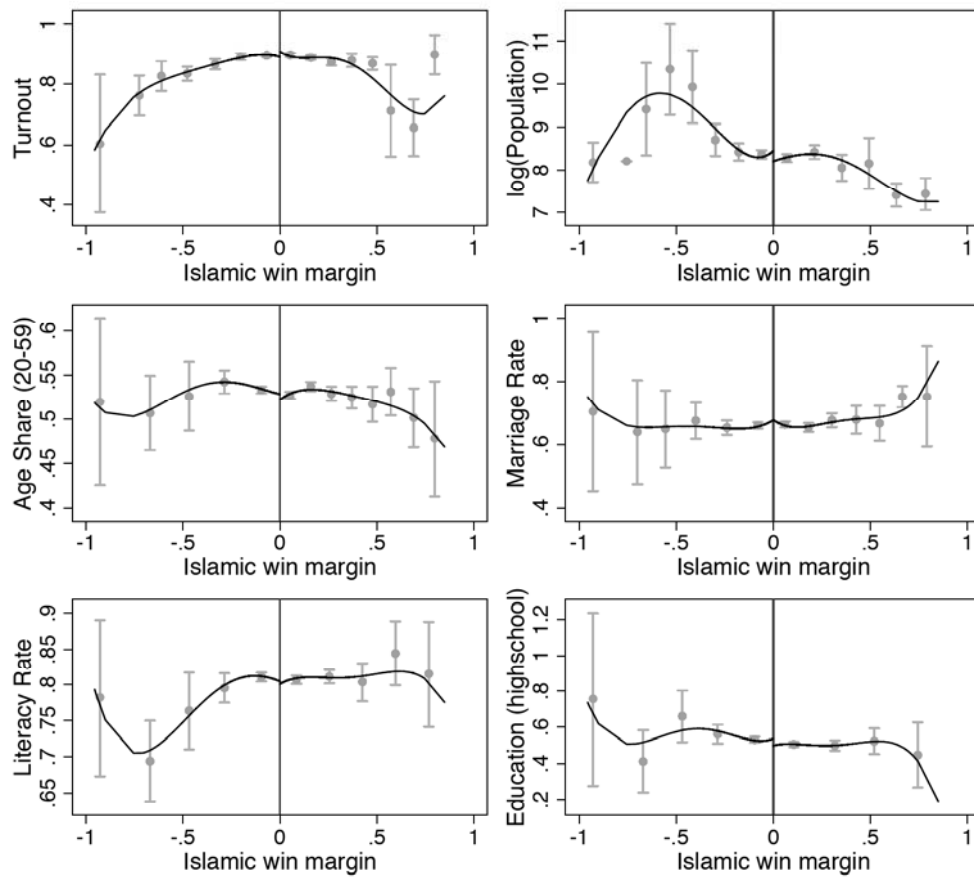


Figure A.5: Covariate Balancing for municipalities where any of the pro-Islamist parties won or lost against a secular party. Graphical illustration of the continuity of covariates around the RD threshold. Unconditional means of covariates in bins are displayed on either side of the threshold. Graphs are produced using the 'rdplot' package by Calonico et al. [2014]. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. The ticks show 95% confidence intervals. p-value from SUR estimations is 0.314. Regression results are available upon request.

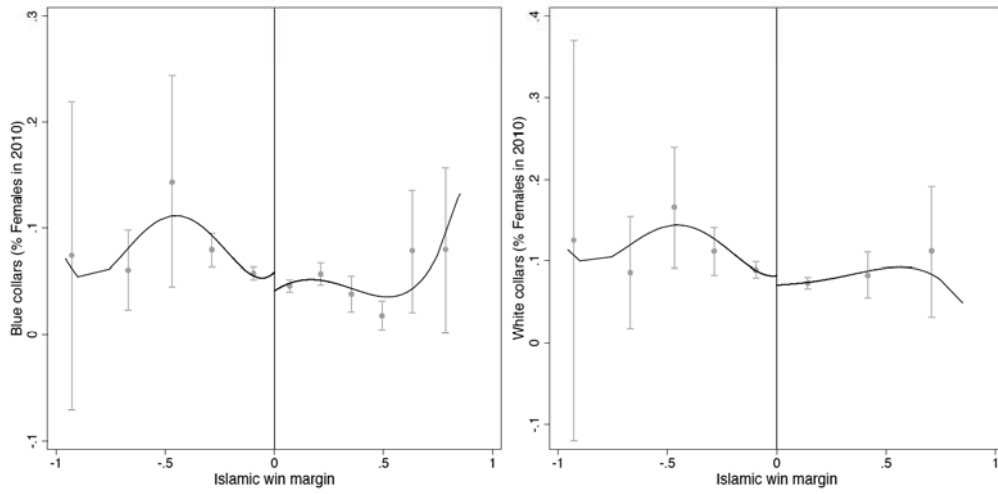


Figure A.6: Mayor Effect. Share of female employees among blue and white-collar workers in 2010 are plotted against AKP win margin in 2009, when any of the pro-Islamist parties have won or lost to a secular party. Graphs show unconditional means in bins on either side of the threshold. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. Ticks indicate the 95% confidence intervals. Graphs are plotted using the 'rdplot' package by Calonico et al. [2014].

Table A.4: Mayor Effect - RD

Share of Female Employees (2010)					
Panel A: Blue-Collars					
	(1)	(2)	(3)	(4)	(5)
Islamist mayor	-0.001	-0.025	0.002	0.002	-0.001
Robust se	(0.011)	(0.024)	(0.009)	(0.010)	(0.012)
Obs.	1048	309	1153	1461	1584
Bandwidth	0.10	0.02	0.11	0.17	0.19
Order of local pol.	1	1	1	2	3
Covariates	No	Yes	Yes	Yes	Yes
Panel B: White-Collars					
	(1)	(2)	(3)	(4)	(5)
Islamist mayor	-0.007	0.019	-0.005	-0.010	-0.009
Robust se	(0.016)	(0.036)	(0.014)	(0.017)	(0.020)
Obs.	1388	441	1404	1624	1735
Bandwidth	0.13	0.03	0.13	0.17	0.20
Order of local pol.	1	1	1	2	3
Covariates	No	Yes	Yes	Yes	Yes

Causal effects of AKP mayor on the share of female employees for blue-collars are displayed in Panel A; for the white-collars displayed in Panel B. Analysis sample includes municipalities where any of the pro-Islamist parties won or lost the elections to a secular party. RD regressions are estimated using the optimal bandwidth and robust confidence intervals calculated by ‘`rdrobust`’ in STATA (Calonico et al. [2014]). In column 2, I experiment with a slightly smaller bandwidth, obtained by dividing the optimal bandwidth by 4. All standard errors are clustered at the district level. Estimates are robust to optimization of the bandwidth separately on each side of the cutoff. Column 1 shows results without covariates, columns 2-5 with covariates. Covariates include AKP vote share, turnout, logged population, share of working age population, marriage ratio, literacy rate, and relative education (females/males). Columns 1-3 report results from local linear regressions. Columns 4 and 5 include a quadratic and cubic control function of the running variable. Bias-corrected robust standard errors are reported in parentheses. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

A.3 Municipal Council: Fuzzy RDD

Municipal council is the approval body of the mayor, and is also elected in the local elections. The electoral rule is proportional representation with a 10 %

threshold. The rule to pass decisions in the council is simple majority. Therefore, the party that gets more than half of the seats in the council has an absolute majority premium, as all decisions are passed without barriers. As an alternative treatment, I consider absolute majority of the Islamist party AKP in the municipal council. I employ a fuzzy RDD.⁴³ As forcing variable, I use the vote share for AKP in the municipal council elections. The treatment is absolute majority of seats. There's a jump in the probability of treatment at 50% of vote share. Figure A.7 show the fuzzy design, i.e., the assignment to treatment. Probability of treatment jumps at the 50 % vote share, confirming the existence of a first-stage. I then use the discontinuity as an IV, and present results from the RD second stage. Figure A.8 tests for discontinuity in the density of the running variable.

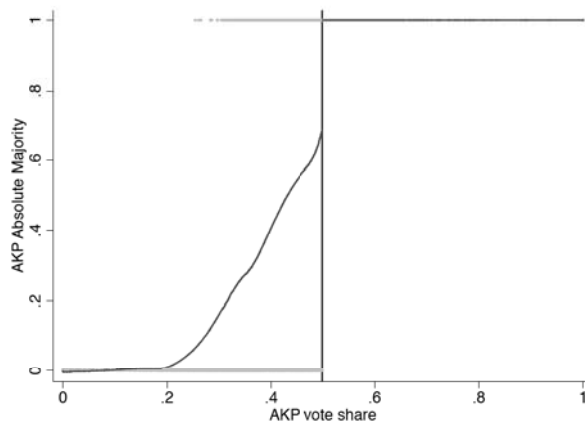


Figure A.7: Assignment to Treatment in Fuzzy RDD. The graph shows the assignment to treatment, obtaining absolute majority of seats in the municipal council by the running variable, vote share of the AKP. The probability of treatment is between 0 and 1 for AKP vote share less than 0.5. The probability of treatment jumps to 1 for AKP vote share greater than or equal to 0.5.

⁴³In a PR election system, vote shares do not translate directly into seat shares, hence the sharp RDD with the win margin cannot be applied. See Freier and Odendahl [2015], Kotakorpi et al. [2014], Pettersson-Lidbom [2008], Fiva et al. [2013] and Folke [2014] for application of RDD in the context of PR election systems. I implement a simple fuzzy RDD using the vote share for the AKP as the forcing variable.

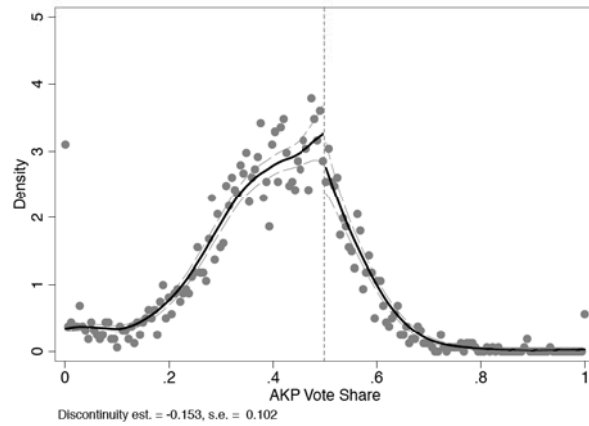


Figure A.8: Density of the Running Variable using McCrary Density Test. McCrary Density Test (McCrary [2008]) shows that there is no significant jump in the density of the running variable at the RD threshold.

Figure A.9 visualizes the treatment effect of having absolute majority in the municipal council on the share of female employees within the municipality. Table A.5 documents the OLS and RD second-stage results. Although the treatment is correlated strongly and negatively with both outcome variables, the RD results show that this is not causal. There is no absolute majority premium.

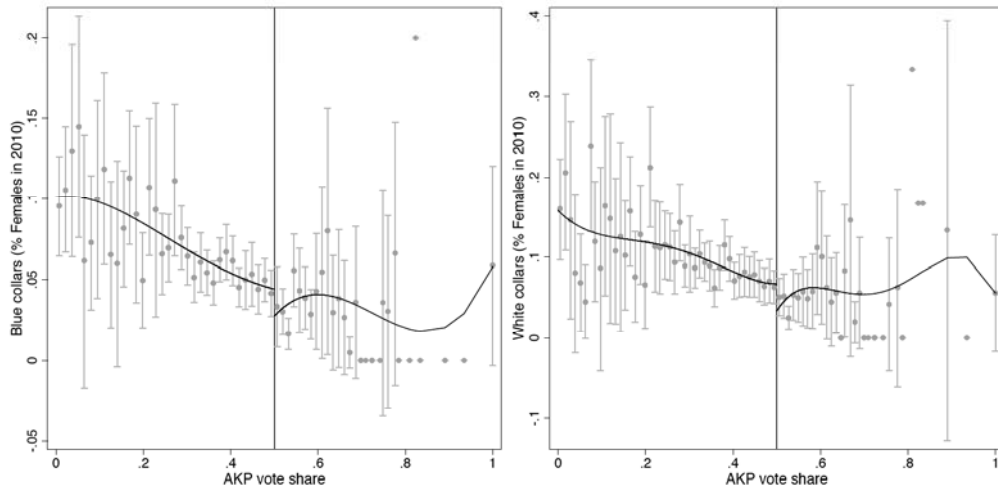


Figure A.9: Absolute Majority Effect. Share of female employees among blue and white-collar workers in 2010. The graphs display unconditional means of the outcome in bins on either side of the threshold. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at 50% of the votes. Ticks indicate the 95% confidence intervals. Graphs are plotted using the ‘rdplot’ package by Calonico et al. [2014].

Table A.5: Seats in the Municipal Council

	Share of Female Employees (2010)			
	Blue-Collars		White-Collars	
	OLS	Fuzzy RD	OLS	Fuzzy RD
Absolute Seat Majority	-0.021*** (0.004)	-0.040 (0.048)	-0.026*** (0.005)	-0.048 (0.058)
Obs.	2528	1221	2784	1152
Bandwidth	1.00	0.10	1.00	0.08

The table shows the effect of AKP having absolute majority in the municipal council on the share of female employees among blue and white-collar workers. Results from the second stage regressions of the fuzzy RD are displayed, using AKP vote share as instrument. Columns 1 and 3 display correlations from OLS regressions, columns 2 and 4 display results from second stage fuzzy RD estimations, using ‘rdrobust’ package by Calonico et al. [2014]. All standard errors are clustered at the district level. ***, ** and * denote significance at 10, 5 and 1 percent levels, respectively.

A.4 RD Validity Tests for Subsamples

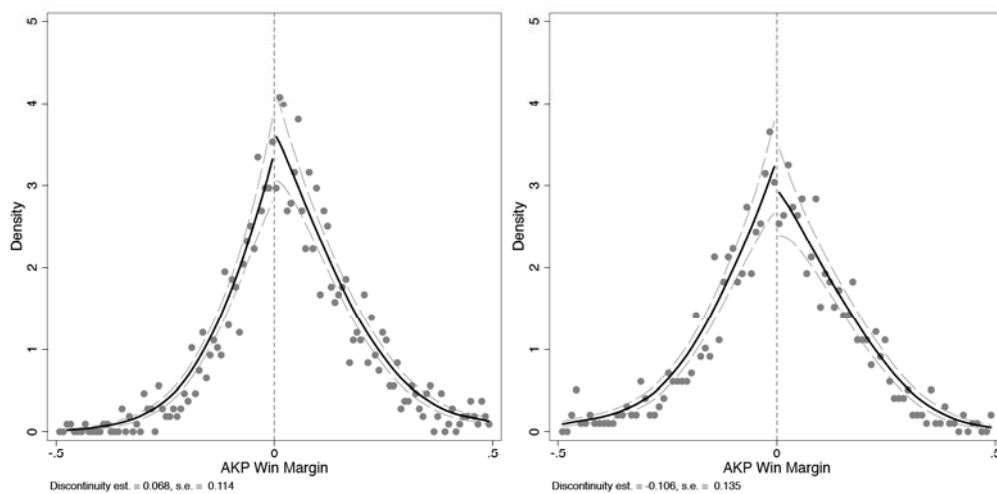


Figure A.10: Density of the Running Variable for subsamples S1-S4. McCrary Density Test (McCrary [2008]) shows that there is no significant jump in the density of the running variable at the RD threshold for any of the subsamples.

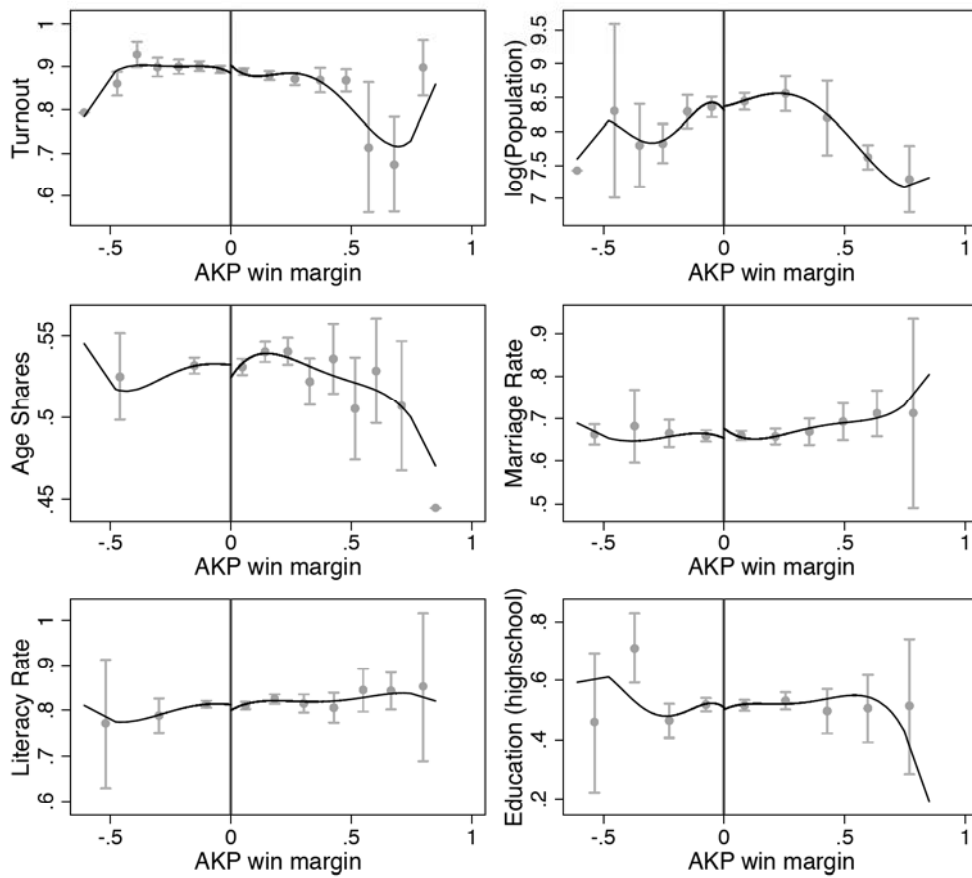


Figure A.11: Covariate Balancing for the subsample where AKP was the incumbent. Graphical illustration of the continuity of covariates around the RD threshold. Unconditional means of covariates in bins are displayed on either side of the threshold. Graphs are produced using the ‘rdplot’ package by Calonico et al. [2014]. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. The ticks show 95% confidence intervals. p-value from SUR estimations is 0.742. Regression results are available upon request.

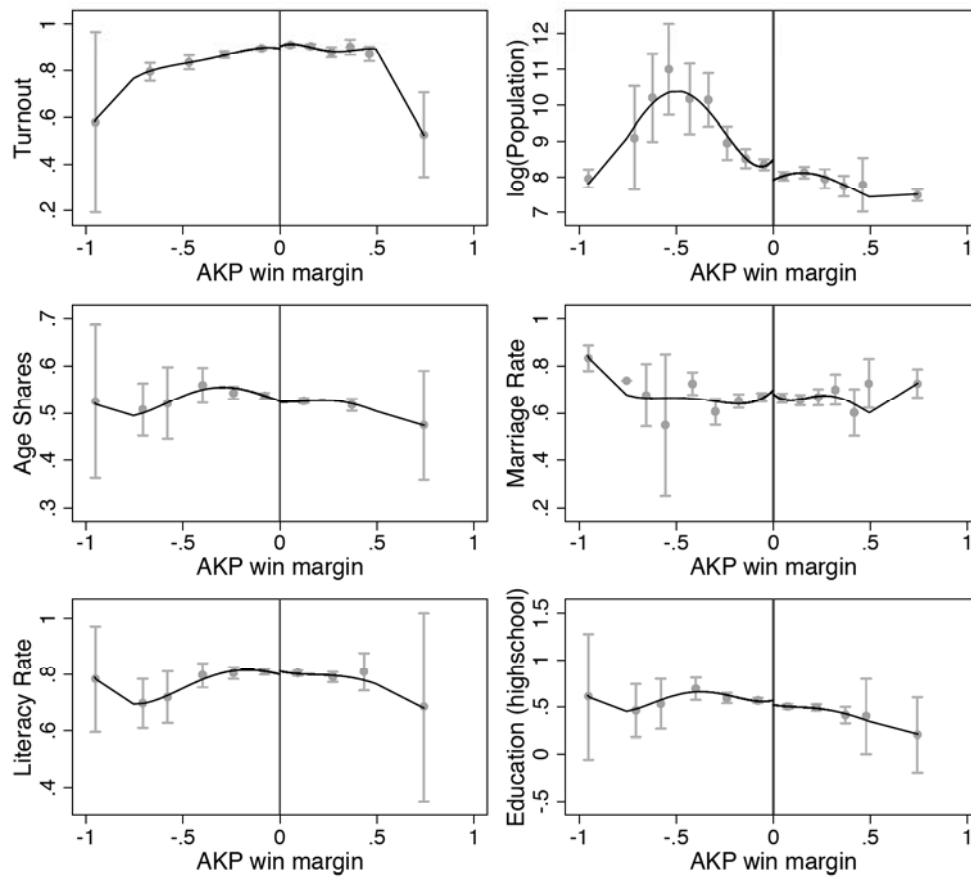


Figure A.12: Covariate Balancing for the subsample where the incumbent was a secular party. Graphical illustration of the continuity of covariates around the RD threshold. Unconditional means of covariates in bins are displayed on either side of the threshold. Graphs are produced using the ‘rdplot’ package by Calonico et al. [2014]. The solid line represents the predicted values of a local polynomial smoother estimated using raw data on each side of the threshold at zero. The ticks show 95% confidence intervals. p-value from SUR estimations is 0.377. Regression results are available upon request.

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