

SUPPLEMENT TO “ISLAMIC RULE AND THE EMPOWERMENT  
OF THE POOR AND PIOUS”

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APPENDIX A: DATA VARIABLES

SOURCE: Türkiye İstatistik Kurumu (Turkish Statistical Institute), [www.tuik.gov.tr](http://www.tuik.gov.tr).

A.1. *Election Data (Mahalli İdareler Seçimi, Milletvekili Genel Seçimi)*

- Islamic mayor in 1994 is a dummy variable taking on the value of 1 if the municipality received a mayor in 1994 from either the Welfare Party (*Refah Partisi*, RP), which received 19.4 of the votes and was awarded 329 municipalities; or the Great Union Party (*Büyük Birlik Partisi*, BBP), which received 0.94 of the votes and was awarded 11 municipalities. For the Islamic mayor in 1989 variable, RP is the only Islamic party.
- Islamic win margin is defined as the difference in vote share between the largest Islamic party and the largest secular party.
- Municipality dummies: Dummy variables indicating whether a municipality is a district center, province center, metropolitan, or sub-metropolitan municipality.
- Islamic vote share 2004: The share of valid votes for the sum of the Adalet ve Kadimli Partisi (AKP) or Saadet Partisi (SP) in the 2004 local elections.

A.2. *Population Census 1990/2000 (Genel Nüfus Sayımları)*

- Share of Population With High School Education is the number of individuals (male/female) in any of the cohorts 15–20, 21–25, 15–25, or above 31, recorded in the relevant census municipality as having obtained secondary education degree (Lise) divided by the total population (male/female) in the municipality.
- Share of Population Classified as Students in the Age Cohort 15–30: Shares of all men and women within the age cohort 15–30 who in the census are classified as students.
- Share of Population With Primary Education in the 15–20 Age Cohort is the number of individuals in this cohort recorded in the relevant census mu-

municipality as having obtained primary education degree (İlkokul or İlköğretim) divided by the total population (male/female) in the municipality.

- Share of Population With Vocational Education in the Age Cohort 15–20 is the number of individuals in this cohort recorded in the relevant census municipality as having obtained vocational education degree (Lise dengi meslek) divided by the total population (male/female) in the municipality

- Age Distribution Shares: The share of the population below 20 years of age, and above 60 years of age.

- Gender Ratio: Ratio of female-to-male population.

- Employed: The share of all men and women in the 15–30 cohort classified as employed in the non-agricultural labor force.

- Housewives: The share of all women in the 15–30 cohort classified as ev kadini, or housewife.

- Married: The share of all women in the 15–30 cohort who are married.

- Literacy Rate: The number of literate people in a municipality divided by the municipal population.

### A.3. *Building Census 2000 (Bina Sayımı)*

- Log Population Density 1990: The logarithm of total population in 1994 divided by total building floor space in 1990.

- Share of Education Floor Space in 1990: Share of total municipal floor space stock, consisting of education facilities in 1990.

- Educational Buildings: Total educational floor space constructed between 1990 and 2000 divided by total floor space built between 1990 and 2000.

- Private Share of Educational Buildings: The privately financed educational floorspace constructed between 1990 and 2000 divided by total educational floorspace built between 1990 and 2000.

- Vakıf-Owned Educational Buildings: The vakıf-owned educational floorspace constructed between 1990 and 2000 divided by total educational floor space built between 1990 and 2000.

- Municipality-Owned Educational Buildings: The municipality-owned educational floorspace constructed between 1990 and 2000 divided by total educational floor space built between 1990 and 2000.

- Government-Owned Educational Buildings: The government-owned educational floorspace constructed between 1990 and 2000 divided by total educational floor space built between 1990 and 2000.

- Religious Building Share: The religious floorspace constructed between 1990 and 2000 divided by total floor space built between 1990 and 2000.

### A.4. *Building Permit Statistics (Yapı İzin İstatistikleri)*

- Education Share of Building Permits: The share of building permits given to construction of education facilities between 1994 and 1999.

- Private Share of Education Building Permits: The share of education building permits given to private investors between 1994 and 1999.

A.5. 2011 Address Based Population Registration System (*Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları*)

- Share With High School (15–19, 15–39): The share of the cohort-specific population with completed general high school or vocational high school in 2011.
- Unmarried (15–29): The share of the age cohort 15–19 reported as not married.

APPENDIX B: ADDITIONAL TABLES AND FIGURES

TABLE S.I  
PLACEBO EFFECTS ON COVARIATES<sup>a</sup>

Outcome	Log Pop.	Islamic Vote Share	Number of Parties	Household Size	Age Cohort		Gender Ratio	Center Munic.
					< 19	> 60		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Local linear RD with optimal bandwidth $\hat{h}$								
Islamic mayor in 1994	0.062 (0.198)	0.000 (0.010)	0.031 (0.337)	-0.084 (0.350)	-0.007 (0.009)	0.002 (0.004)	0.004 (0.018)	-0.043 (0.065)
<i>p</i> -value	0.867							
Bandwidth	0.18	0.29	0.18	0.18	0.23	0.21	0.27	0.17
Observations	808	1203	817	824	991	906	1119	796
Panel B: Local linear RD with optimal bandwidth $\hat{h}/2$								
Islamic mayor in 1994	-0.112 (0.273)	-0.000 (0.014)	-0.325 (0.454)	0.293 (0.541)	-0.002 (0.012)	-0.001 (0.005)	0.001 (0.021)	-0.130 (0.093)
<i>p</i> -value	0.906							
Bandwidth	0.09	0.15	0.09	0.09	0.11	0.10	0.13	0.09
Observations	436	693	437	442	567	508	637	423

<sup>a</sup>The table shows local linear regression results using optimal bandwidths of having an Islamic mayor elected in 1994. The outcomes in column order are log population in 1994, Islamic vote share in 1994, the number of vote-receiving parties in 1994, household size in 2000, population share below 19 in 2000, population share above 60 in 2000, gender ratio in 2000, and a dummy for whether the municipality was center (*merkez*) municipality in 1994. The optimal bandwidth is determined by the Imbens and Kalyanaraman (2011) algorithm. Panel A restricts the sample to the optimal bandwidth  $\hat{h}$ , while Panel B restricts it to  $\hat{h}/2$ . The *p*-value represents a test using seemingly unrelated regressions of the null hypothesis that estimates in all columns are jointly equal to zero. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE S.II  
PLACEBO EFFECTS ON 1990 CENSUS OUTCOMES<sup>a</sup>

Outcome	High School		Log Pop.	Age Cohort		Share Married	Sex Ratio	Share Employed
	Women	Men		< 19	> 60			
Outcome	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Local linear RD with optimal bandwidth $\hat{h}$								
Islamic mayor in 1994	0.012 (0.012)	0.007 (0.013)	-0.057 (0.201)	-0.023** (0.011)	0.003 (0.004)	0.007 (0.006)	0.021 (0.027)	-0.001 (0.001)
<i>p</i> -value	0.715							
Bandwidth	0.14	0.23	0.16	0.19	0.27	0.23	0.33	0.14
Observations	363	576	513	607	814	702	991	447
Panel B: Local linear RD with optimal bandwidth $\hat{h}/2$								
Islamic mayor in 1994	0.006 (0.021)	0.012 (0.017)	-0.375 (0.328)	-0.008 (0.016)	0.004 (0.005)	-0.004 (0.009)	0.022 (0.036)	-0.001 (0.002)
<i>p</i> -value	0.736							
Bandwidth	0.07	0.11	0.08	0.10	0.14	0.11	0.16	0.07
Observations	195	311	265	309	445	382	535	240

<sup>a</sup>Table shows additional local linear regression results for 1990 census outcomes: the share of women aged 15–20 with high school degree, the share of men aged 15–20 with high school degree, the share of population below 19, log population, the share of population above 60, the share of all women married, the gender ratio, and the share of all women in the labor force. The optimal bandwidth is determined by the Imbens and Kalyanaraman (2011) algorithm. Panel A restricts the sample to the optimal bandwidth  $\hat{h}$ , while Panel B restricts it to  $\hat{h}/2$ . The *p*-value represents a test using seemingly unrelated regressions of the null hypothesis that estimates in all columns are jointly equal to zero. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE S.III  
RD TREATMENT EFFECTS ON TYPES OF EDUCATION IN 15–20 AGE COHORT<sup>a</sup>

Education Type Cohort	Completed Education in 2000					Student Share 15–30 (6)
	Primary	Middle	Voc. Middle	High	Voc. High	
	15–20 (1)	15–20 (2)	15–20 (3)	15–20 (4)	15–20 (5)	
Panel A: Women						
Outcome mean	0.798	0.249	0.038	0.152	0.035	0.127
Islamic mayor in 1994	–0.011 (0.010)	0.035*** (0.008)	–0.002 (0.003)	0.028*** (0.007)	–0.002 (0.003)	0.014*** (0.005)
Bandwidth	0.251	0.286	0.153	0.240	0.152	0.205
Observations	1050	1188	720	1020	718	904
Panel A: Men						
Outcome mean	0.735	0.350	0.061	0.194	0.056	0.197
Islamic mayor in 1994	–0.002 (0.007)	0.002 (0.008)	–0.005 (0.005)	0.010 (0.007)	–0.005 (0.005)	0.014 (0.009)
Bandwidth	0.340	0.294	0.204	0.323	0.184	0.230
Observations	1407	1222	898	1341	833	993

<sup>a</sup>The table shows results from local linear RD regressions using the optimal bandwidth calculated using the Imbens and Kalyanaraman (2011) algorithm. Outcomes in columns 1–4 are completion rates for primary, middle, and high school, respectively, while column 5 has the student share in the 15–30 age cohort as the outcome. All specifications include controls for Islamic vote share, number of vote-receiving parties, log population, population share below 19, population share above 60, gender ratio, municipality type dummies, and province fixed effects. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE S.IV  
TREATMENT EFFECTS ON ADDITIONAL OUTCOMES IN 2000<sup>a</sup>

Outcome	University Education		Employed		Housewives	Married	
	26–30		15–30		15–30	15–30	
Cohort							
Gender	Women	Men	Women	Men	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: OLS							
Outcome mean	0.056	0.098	0.081	0.357	0.250	0.486	0.320
Islamic mayor in 1994	−0.004 (0.005)	−0.001 (0.005)	−0.008* (0.004)	−0.012 (0.009)	0.013* (0.007)	0.000 (0.006)	−0.007 (0.005)
R <sup>2</sup>	0.52	0.44	0.66	0.66	0.90	0.39	0.46
Observations	2631	2631	2631	2631	2631	2631	2631
Panel B: RD local linear							
Outcome mean	0.053	0.102	0.072	0.368	0.307	0.491	0.329
Islamic mayor in 1994	0.010** (0.004)	0.014*** (0.005)	0.003 (0.004)	−0.027** (0.012)	−0.018* (0.010)	−0.008 (0.008)	−0.013* (0.007)
Bandwidth	0.188	0.177	0.164	0.282	0.198	0.223	0.193
R <sup>2</sup>	0.56	0.50	0.79	0.72	0.92	0.44	0.54
Observations	855	814	766	1176	882	966	872

<sup>a</sup>The table shows OLS results without control functions and with full bandwidths in Panel A, RD local linear results with optimal bandwidths in Panel B, and *p*-values from SUR tests of equality between OLS and RD coefficients in Panel C. The outcomes are the share of men and women 26–30 years of age with university education (columns 1–2), shares of men and women 15–30 years of age in non-agricultural employment (columns 3–4), the share of women 15–30 years of age categorized as housewives (column 5), shares of men and women aged 15–30 years of age married (columns 6–7). All specifications include controls for log population, population share below 19, population share above 60, gender ratio, municipality type dummies, and province fixed effects. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE S.V  
 OLS/RD SPECIFICATIONS WITH AND WITHOUT CONTROL FOR ISLAMIC VOTE SHARE<sup>a</sup>

Outcome	High School Attainment in 15–20 Age Cohort in 2000			
	OLS		RD	
	No (1)	Yes (2)	No (3)	Yes (4)
Specification	Control for Islamic Vote Share			
Panel A: Women				
Islamic mayor in 1994	−0.014*** (0.004)	0.012** (0.006)	0.027*** (0.007)	0.028*** (0.007)
Population share below 19 in 2000	−0.868*** (0.058)	−0.832*** (0.059)	−0.788*** (0.097)	−0.782*** (0.096)
Population share above 60 in 2000	−0.378*** (0.086)	−0.367*** (0.084)	−0.281* (0.167)	−0.314* (0.160)
Gender ratio in 2000	−0.036*** (0.011)	−0.034*** (0.012)	0.015 (0.031)	0.010 (0.030)
District center	0.063*** (0.005)	0.062*** (0.005)	0.058*** (0.008)	0.057*** (0.007)
Province center	0.039*** (0.009)	0.040*** (0.009)	0.029** (0.011)	0.038*** (0.011)
Sub-metro center	0.020* (0.011)	0.021* (0.011)	0.015 (0.012)	0.026** (0.013)
Number of parties	0.000 (0.001)	−0.001 (0.001)	0.002 (0.002)	−0.001 (0.002)
Islamic vote share 1994		−0.100*** (0.015)		−0.111*** (0.031)
Islamic winning margin			−0.125*** (0.035)	−0.050 (0.043)
Islamic winning margin * Islamic mayor			−0.052 (0.077)	−0.048 (0.079)
Bandwidth	1.00	1.00	0.24	0.24
R <sup>2</sup>	0.54	0.55	0.65	0.65
Observations	2629	2629	1020	1020

<sup>a</sup>The table shows conditional OLS (columns 1–2) and RD (3–4) results controlling for the Islamic vote share in even columns. In columns 3–4, the optimal bandwidth is calculated using the Imbens and Kalyanaraman (2011) algorithm. All specifications include controls for the number of vote-receiving parties, log population, population share below 19, population share above 60, gender ratio, municipality type dummies, and province fixed effects. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

TABLE S.VI  
TREATMENT EFFECTS BY COHORT<sup>a</sup>

	Completed High School in 2000 by Age Cohort					
	15–20 (1)	21–25 (2)	26–30 (3)	31–64 (4)	(1)–(4A) (5)	(1)–(4B) (6)
	Panel A: Women					
Outcome mean	0.153	0.156	0.088	0.033	0.122	0.062
Islamic mayor in 1994	0.026*** (0.007)	0.023*** (0.007)	0.015** (0.006)	0.006** (0.003)	0.020*** (0.005)	0.014*** (0.005)
Observations	1096	1073	959	851	1385	1192
Bandwidth	0.26	0.26	0.22	0.19	0.33	0.29
	Panel B: Men					
Outcome mean	0.195	0.266	0.172	0.093	0.162	0.102
Islamic mayor in 1994	0.010 (0.007)	0.015** (0.007)	0.010 (0.007)	0.012*** (0.004)	0.007 (0.007)	–0.001 (0.007)
Observations	1087	1980	1366	916	848	972
Bandwidth	0.26	0.46	0.33	0.21	0.19	0.22

<sup>a</sup>The table shows local linear regression results using optimal bandwidths of having an Islamic mayor elected in 1994. The outcome in columns 1–4 are the cohort share with completed high school for age cohorts 15–20, 21–25, 26–30, and 31–64. The outcomes in columns 5–6 are the gender-specific high school completion share for the 15–20 age cohort minus the corresponding share among the 31–64 age cohort for women (4A) in column 5 and men (4B) in column 6. The optimal bandwidth is determined by the Imbens and Kalyanaraman (2011) algorithm. Controls include the Islamic vote share, the number of vote-receiving parties, log population, population share below 19, population share above 60, gender ratio, municipality type dummies, and province fixed effects. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.



TABLE S.VII  
TREATMENT EFFECTS ON DEMOGRAPHICS IN 2000<sup>a</sup>

Age Cohort	6–14 (1)	15–20 (2)	21–25 (3)	26–30 (4)	31–64 (5)	65+ (6)
Panel A: Outcome is female cohort population shares						
Outcome mean	0.222	0.155	0.103	0.098	0.355	0.066
Islamic mayor in 1994	–0.002 (0.006)	–0.004 (0.003)	0.001 (0.002)	0.002 (0.001)	0.002 (0.007)	0.001 (0.004)
<i>p</i> -value	0.616					
Bandwidth	0.18	0.22	0.26	0.21	0.17	0.22
Observations	837	948	1079	939	799	957
Panel B: Outcome is male cohort population shares						
Outcome mean	0.228	0.157	0.106	0.097	0.355	0.056
Islamic mayor in 1994	–0.004 (0.008)	–0.002 (0.004)	0.000 (0.003)	0.002 (0.002)	0.006 (0.008)	0.000 (0.003)
<i>p</i> -value	0.827					
Bandwidth	0.24	0.21	0.23	0.24	0.20	0.25
Observations	1014	925	983	1012	884	1057
Panel C: Outcome is cohort gender ratio						
Outcome mean	0.975	0.996	1.002	1.024	1.015	1.237
Islamic mayor in 1994	0.006 (0.017)	–0.002 (0.017)	–0.000 (0.016)	0.016 (0.015)	–0.011 (0.012)	–0.028 (0.023)
<i>p</i> -value	0.316					
Bandwidth	0.22	0.29	0.46	0.26	0.39	0.38
Observations	948	1198	1968	1098	1679	1613

<sup>a</sup>The table shows local linear regression results using optimal bandwidths of having an Islamic mayor elected in 1994. The outcomes in Panel A (B) are female (male) population shares for the age cohorts 6–14, 15–20, 21–25, 26–30, 31–64, and above 65 from the 2000 census. The outcomes in Panel C represent gender ratios for the same age cohorts. The optimal bandwidth is determined by the Imbens and Kalyanaraman (2011) algorithm. The *p*-value represents a test using seemingly unrelated regressions of the null hypothesis that estimates in all columns in the same panel are jointly equal to zero. Standard errors, clustered by province, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

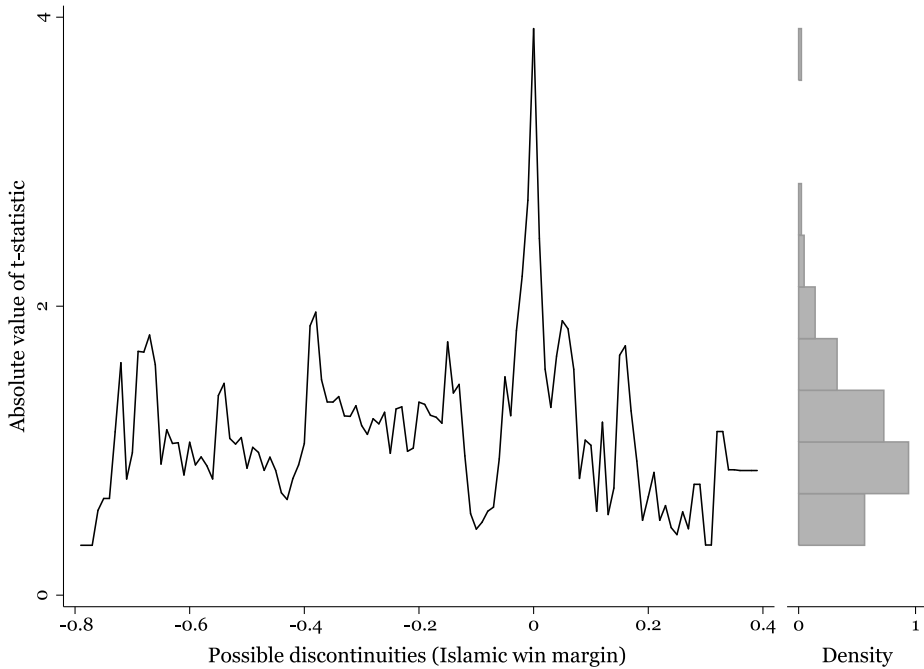


FIGURE S.1.—Alternative discontinuities. The graph shows, on the left-hand side, average absolute  $t$ -statistics of placebo RD estimates at various potential cutoffs. Points above 0.4 and below  $-0.8$  in the forcing variable are excluded due to the small number of observations beyond these values. The  $t$ -statistics are averages of three different full bandwidth control function specifications; specifically, a quadratic, cubic, and quartic control function estimated on each side of the cutoff. All specifications include controls for the Islamic vote share, the number of vote-receiving parties, log population, population share below 19, population share above 60, gender ratio, municipality type dummies, and province fixed effects. The right-hand side shows the distribution of the  $t$ -statistics.

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