ONLINE APPENDIX

"Racial and Ethnic Representation in Local Government"
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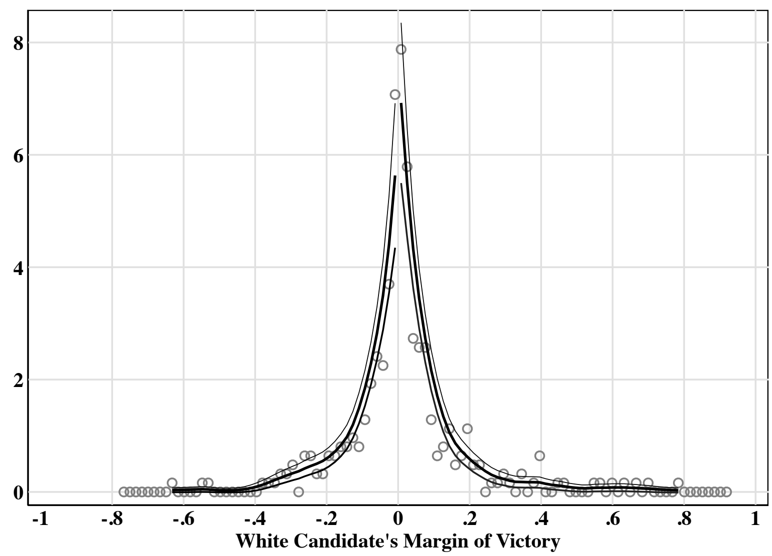
Figure A1 examines whether, in close elections, nonwhite candidates have a distinct advantage or disadvantage. Following McCrary (2008), we plot a discontinuous density function around the cutoff (win margin=0) and test for whether the discontinuity is statistically distinguishable from zero. The results of Figure A1 suggest that, near the cutoff value, the number of nonwhite winners is statistically indistinguishable from the number of white winners, suggesting that neither group has a distinct advantage/disadvantage.

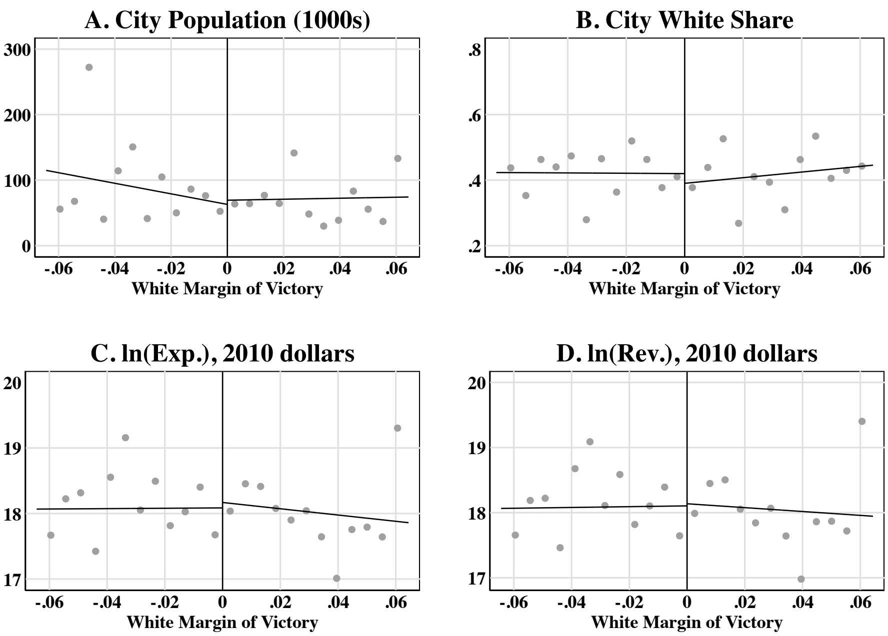
Figure A1: McCrary density plot



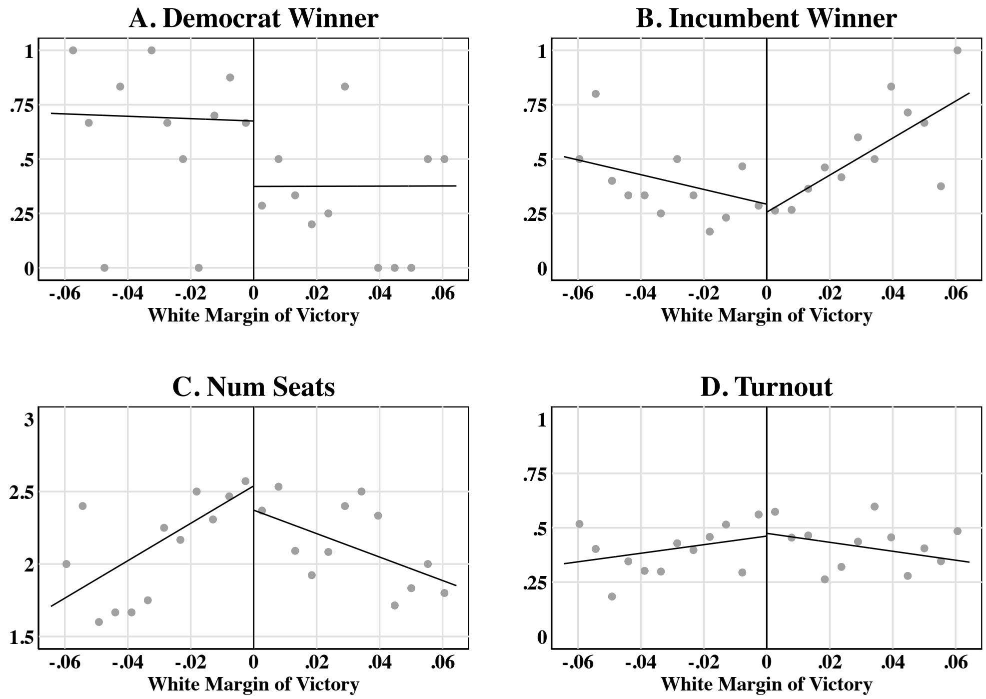
Notes: The figure depicts the distribution of relevant elections around the cutoff that determines whether a white or nonwhite candidate wins. The x-axis measures the nonwhite candidate's margin of victory (nonwhite candidate vote share minus white candidate vote share).

Figures A2, A3, and A4 examine whether other city-level characteristics (A2), candidate characteristics (A3), and housing characteristics (A4) are balanced at the cutoff. The only variable where we can reject equality at the cutoff is partisan affiliation: nonwhite candidates are more likely to be registered Democrats. We implement two tests to help rule out that our findings are driven by correlations between race and partisan affiliation. First, we show that our results continue to hold when we restrict the sample to close elections where both marginal candidates are of the same party (Figure 5). Second, in Appendix Table 2 where we re-run our analysis on a sample of close Democrat vs Republican elections (regardless of race) and showing that the election of a Democrat does not differentially improve home values in majority nonwhite neighborhoods.

Appendix Figure A2: City characteristic balance test



Appendix Figure A3: Candidate characteristic balance test



Appendix Figure A4: Housing characteristic balance test

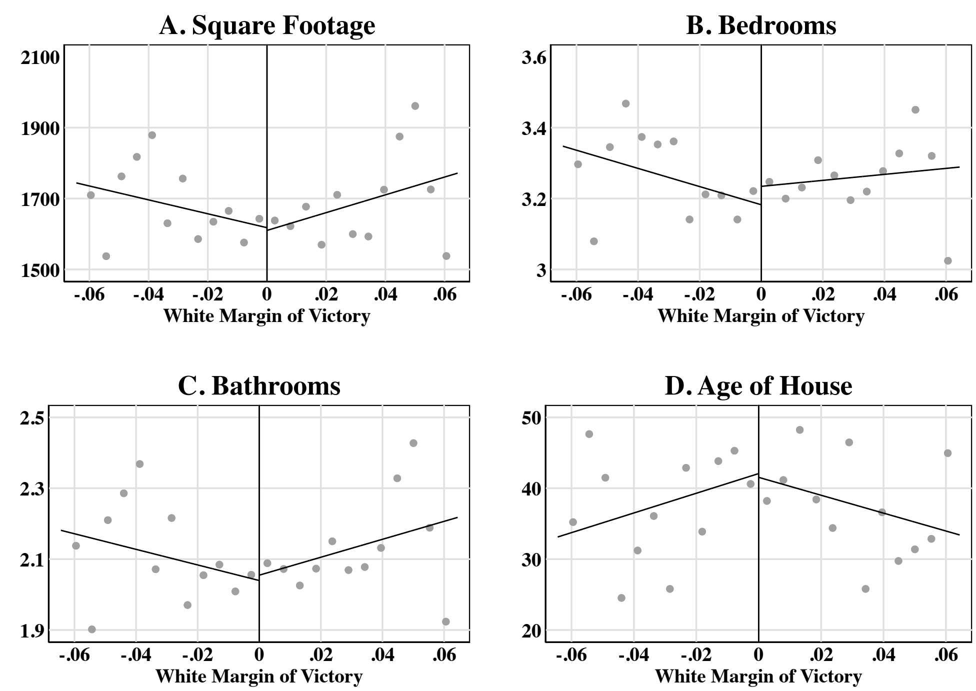


Table A1 examines how the outcome of an ethnically diverse election affects the ethnic composition of the city council. Relative to elections where the white candidate wins, we would expect the number of nonwhite councilmembers to increase by one if the nonwhite candidate wins. However, since most elections involve more than one seat, this does not have to be true. In column 1 we see that the narrow election of a nonwhite candidate increases the number of nonwhite members in the year following the election by about 0.7 (and the confidence interval contains 1). Columns 2 through 6 adopt a panel framework, which evaluates the change in nonwhite representation for a given year relative to the year before the relevant election. For each of the first 4 years that correspond to the councilmember's term, we see estimates that are close to 1, indicating that the narrow election of a nonwhite rather than white candidate does increases nonwhite representation on the council. Note that the number of observations and point estimates changes from year to year as some councilmembers may resign the ethnicity of the appointed councilmember may vary or may not be observed in our dataset. Column 6 compares nonwhite representation 5 years after the relevant election, which would represent the year after re-election (should the candidate run for re-lection). At this point, we are down to 54 relevant elections and the estimates are quite imprecise, as the confidence interval contains both 0 and 1.

Table A1: Impact of nonwhite winner on council composition

DV is number of nonwhite city councilors						
	Year after election (1)	1 year after vs 1 year before (2)	2 years after vs 1 year before (3)	3 years after vs 1 year before (4)	4 years after vs 1 year before (5)	5 years after vs 1 year before (6)
Nonwhite winner	0.677					
	(0.316)					
Nonwhite winner X Post		0.912	0.903	0.894	1.220	-0.115
		(0.205)	(0.232)	(0.426)	(0.467)	(0.767)
Observations	179	308	274	206	164	108

Notes: Robust standard errors (clustered at city-level) in parentheses. Column 1 restricts to councils where we observe the ethnicity of all councilmembers in the term following the relevant election (ethnically diverse and decided by 6.44 percentage points or less). Columns 2-5 require that we observe the ethnicity for every member in the year before the relevant election as well as the evaluation year (as specified in the column heading) following the relevant election.

In Table A2 we further assess whether our results are driven by partisan differences by estimating the differential impact on neighborhood type following the election of a Democrat councilmember. To do so, we identify every election where 1) the marginal winner was a Democrat (Republican) 2. the marginal loser was a Republican (Democrat), and 3. the margin of victory was decided by less than 6.44 percentage points. With this sample in hand, we then replicate Panel B of Table 4 in the text, except that we swap out our ethnicity variable for partisan affiliation. The results in Table A2 suggest that, if anything, Democrat councilmembers lead to a relative decline in housing values in majority nonwhite neighborhoods, however that result is not precisely estimated and is quite sensitive to the inclusion of city time trends (our preferred specification). Nevertheless, this increases our confidence that our main results are not driven by a correlation between ethnicity and partisan affiliation.

Table A2: Neighborhood differences following the election of a Democrat councilmember

DV is ln(sale price), inflation and market adjusted				
	(1)	(2)	(3)	(4)
Dem. win X Post	0.088	0.094	0.060	0.002
	(0.075)	(0.065)	(0.047)	(0.032)
Dem. win X Post	-0.128	-0.147	-0.094	-0.015
X Nonwht. Neigh.	(0.100)	(0.085)	(0.054)	(0.048)
Observations	450,573	450,573	450,573	450,573
Num. Cities	116	116	116	116
House Controls		Y	Y	Y
Neighborhood Controls			Y	Y
City-level time trends			Y	Y

Notes: Robust standard errors (clustered at city-level) in parentheses. All regressions include election fixed effects and time fixed effects. House and neighborhood controls follow from Table 4 (see those notes). Sample restricted to cities that experience an election between a Democrat and a Republican candidate that was decided within a 6.44 percentage point margin. Observations correspond to housing transactions occurring in the two years before and after the relevant election takes place. "Nonwhite Neighborhood" equals 1 if the neighborhood is at least 50% nonwhite.

In Table A3 we present results that incorporate more recent elections. Our analysis requires two key pieces of information: information on the race/ethnicity of city council candidates (as described in text), as well as information on housing transactions. Our main analysis ends in 2011 because that is the last year in which housing transaction data are available through our data agreement. To extend the sample in this appendix, we use tract-by-year housing data from the Federal Housing Finance Agency (FHFA).

The main limitations of the FHFA index, however, is that it is both an aggregation of the measure used in our main analysis and it requires a coarser definition of neighborhood. Our main analysis is at the housing unit level, which allows us to control for housing characteristics (and also run covariate balance checks) to account for the possibility that the type of housing being sold was changing rather than the price. The FHFA is a tract-level average, and so neither of these are possible. Moreover, in our main analysis, we define a neighborhood as a Census Block Group. The Census Block group is a small enough geography to provide the variation that we needed in one of our key variables, as nearly half of Block Groups were majority nonwhite. There are far fewer majority nonwhite census tracts.

With these caveats in mind, Table A3 presents results from this extended sample. Column 1 replicates our main results by restricting to the same election window (2005-2011). The results are qualitatively similar in that the narrow election of a nonwhite (rather than a non-Hispanic white) candidate leads to a statistically significant relative appreciate in housing values in majority nonwhite census tracts. The magnitude is larger than what we found in the paper, but due to the size of the standard errors, the two estimates are not statistically differentiable. In Column 2 we expand our analysis to include more recent elections. The estimates in Column 2 are in line with what we saw in the manuscript, but they are not statistically significant at the 5% level.

One issue with including more recent elections is that, in the 2010's, driven by the California Voting Rights Act, there has been a movement of cities towards district-based elections.[1]As of 2010, fewer than 10% of cities held district-based city council elections. As of 2019, more than 25% did. In Column 3 we restrict attention to at-large elections only. With this

[1] See Appendix Figure A-1 from "The Supply–Equity Trade-off: The Effect of Spatial Representation on the Local Housing Supply" (Hankinson & Magazinnik, 2021) for evidence of the dramatic increase in district-based elections in California in the past ten years.

restriction in place we see a relative (and highly significant) appreciation in majority nonwhite census tracts that is on the order of about 9 percent following the election of a nonwhite candidate.

Appendix Table A3: Extended Sample

DV is ln(FHFA Housing Price Index)			
	(1)	(2)	(3)
Nonwht. win X Post	-0.114	-0.045	-0.037
	(0.047)	(0.041)	(0.039)
Nonwht. win X Post	0.133	0.069	0.090
X Nonwht. Tract	(0.061)	(0.046)	(0.037)
Bandwidth	|6.44|	|3.94|	|3.76|
At-Large Only			Y
Elections	2005-2011	2005-2017	2005-2017
Observation	9,121	11,499	8,150
Num. Cities	134	160	145

Notes: Robust standard errors (clustered at city-level) in parentheses. All regressions include election fixed effects, time fixed effects, city-specific linear time trends and the following tract-level controls: population, population density, male share, over 18 share, over 65 share, race/ethnic shares (non-Hispanic white, Hispanic, Black, Asian/Pacific Islander, Native American, multi, and other), household composition shares (single, married, married with children, etc.) vacant housing share, renter occupied share, owner occupied share, and ethnic fractionalization, share of households below poverty line, and share of households receiving public assistance. Observations correspond to the two years before and after the relevant election takes place. “Nonwhite Tract” equals 1 if the tract has a non-Hispanic white share lower than 50%. Bandwidths selected following the Calonico et al. (2014) procedure.

Appendix Table A4 presents summary statistics for cities in our main analysis based on the degree of racial/ethnic segregation. Segregated cities tend to be larger and have lower non-Hispanic white shares but seem to have similar levels of ethnic diversity. They are more likely to hold district-based elections, but the competitiveness of those elections is similar.

Table A4 Summary statistics by city segregation

	Above med.	Below med.
	(1)	(2)
Total population	117,735	40,754
	(17,874)	(3,296)
Asian/Pac. Isl. share	0.117	0.194
	(0.011)	(0.018)
Black share	0.063	0.053
	(0.008)	(0.005)
Hispanic share	0.450	0.281
	(0.018)	(0.022)
White share	0.363	0.465
	(0.016)	(0.022)
Other share	0.002	0.002
	(0.000)	(0.000)
Ethnic fractionalization	0.567	0.527
	(0.010)	(0.014)
District-based elections	0.151	0.019
	(0.035)	(0.013)
Num. candidates	5.717	5.562
	(0.243)	(0.241)
Num. open seats	2.132	2.267
	(0.081)	(0.073)
Observations	106	105

Notes: Standard deviations in parentheses. Population and ethnicity shares come from the 2000 census. Council size and election information come from the California Elections Data Archive.

4. Evidence from outside of the housing market

This section considers the impact of increased nonwhite representation on a variety of non-housing outcomes. All results reported in this section employ the panel-based regression discontinuity design used elsewhere in the paper, with all specifications estimated with a bandwidth of 6.44 for consistency with our main results. Unless otherwise noted, the outcomes in this section are measured on an annual basis.

4.1 Economic Activity

Table A5 examines patterns in The Census' Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES), a tract-level measure of economic activity. Our main analysis examines economic patterns of with the zip code business patterns database. The advantage of LODES is that it allows us to examine changes in the composition of jobs. The results in Table A5 point to a relative increase in total employment and a larger "higher-paying" job share, based on the number of jobs within a tract within higher monthly earnings brackets. Neither of these results are statistically significant, and so we only interpret them as suggestive. Interestingly, we see little movement in the public administration job share, which suggests that patronage is not a major driver of our results.

Appendix Table A5: LODES

	ln(Tot. Jobs)	Higher paying job share	Public admin. job share
	(1)	(2)	(3)
Nonwht. win X Post	-0.023	-0.008	-0.004
	(0.054)	(0.012)	(0.004)
Nonwht. win X Post X Nonwht. Tract	0.048	0.014	-0.000
	(0.073)	(0.017)	(0.006)
Mean	6.635	0.321	0.017
Num. Cities	140	140	140
Observations	11,332	11,332	11,332

Notes: Robust standard errors (clustered at the city level) reported in parentheses. All regressions include election fixed effects, time fixed effects, and the following tract-level controls: population, population density, male share, over 18 share, over 65 share, race/ethnic shares (non-Hispanic white, Hispanic, Black, Asian/Pacific Islander, Native American, multi, and other), shares of households by household composition (single, married, married with children, etc.) vacant housing share, renter occupied share, owner occupied share, and ethnic fractionalization, share of households below poverty line, and share of households receiving public assistance. Observations correspond to the two years before and after the relevant election takes place. "Nonwhite Tract" equals 1 if the tract has a non-Hispanic white share lower than 50%. Bandwidths selected following the Calonico et al. (2014) procedure.

Table A6 examines business polluting patterns, as observed in the the Environmental Protection Agency's Toxic Release Inventory (TRI) program. Here we see suggestive evidence of a decline in TRI presence in majority nonwhite census tracts following the election of a nonwhite councilmember. While the estimates are not statistically significant, the magnitudes point to a meaningfully-sized effect.

Appendix Table A6: TRI Exposure

Dependent Var:	TRI Presence		New TRI Entry	
	(1)	(2)	(3)	(4)
Nonwht. Winner X Post	0.000	0.006	-0.007	0.002
	(0.008)	(0.018)	(0.007)	(0.008)
Nonwht. Winner X Post		-0.009		-0.014
X Maj. NW. Tract		(0.025)		(0.012)
Mean	0.089	0.089	0.011	0.011
Num. Cities	149	149	149	149
Observations	13023	13023	13023	13023

Notes: Robust standard errors (clustered at the city level) reported in parentheses. All regressions include election fixed effects, time fixed effects, and the following tract-level controls: population, population density, male share, over 18 share, over 65 share, race/ethnic shares (non-Hispanic white, Hispanic, Black, Asian/Pacific Islander, Native American, multi, and other), shares of households by household composition (single, married, married with children, etc.) vacant housing share, renter occupied share, owner occupied share, and ethnic fractionalization, share of households below poverty line, and share of households receiving public assistance. Observations correspond to the two years before and after the relevant election takes place. "Nonwhite Tract" equals 1 if the tract has a non-Hispanic white share lower than 50%. Bandwidths selected following the Calonico et al. (2014) procedure.

4.2 Evidence on city policy

We next report results on outcomes that directly reveal actions taken by the city government. These data are measured only at a city-wide level, and so we are unable to test for differential targeting of policies towards particular groups or areas within the city. Nevertheless, the results do offer some further insight on how minority councilmembers may affect policy.

Table A7 examines the impact on revenues and expenditures. We draw on data from California Cities' Annual Financial Transaction Reports. All outcomes are real dollar amounts (taking 2010 as a base year), measured on a per capita basis. The table shows that the election of a nonwhite council member has no identifiable impact on overall expenditure or revenue, nor on specific categories of expenditures (general government administration, salaries, public goods[2], public safety, transportation, or community development).

[2] "Public goods" is measured as the combination of spending on public safety, transportation, community development, health, culture, and leisure. The measure therefore includes a large bulk of cities' total expenditures, excluding debt servicing and internal costs (government salaries, etc.).

Table A7: Effect of councilmember ethnicity on city financial activity

Dep. Var.	Total Revenue (1)	Total Expenditures (2)	General Government (3)	Salaries & Wages (4)
Nonwht. Winner X Post	-46.953	62.526	-6.811	-19.700
	(97.321)	(110.256)	(33.239)	(15.287)
Mean	1966.06	1979.28	227.79	505.34
Dep. Var.	Public Goods (5)	Public Safety (6)	Transportation (7)	Community Development (8)
Nonwht. Winner X Post	89.866	-8.601	3.507	23.476
	(85.813)	(16.167)	(23.974)	(35.846)
Mean	1411.62	547.89	249.03	214.16

Notes: Sample contains 669 observations across 133 cities. Robust standard error (clustered at the city-level) reported in parentheses. All outcomes are measured in per-capita terms, with population denominators taken from the 2000 census. Regressions mirror Column 1 of Panel A of Table 4 of main text. Since data are at the city-level, we cannot examine distributional effects nor can we include our neighborhood controls. We omit city time trends since our unit of observation has moved from the monthly level to the annual level.

Table A8 examines changes in city ordinances, as observed through updates to the General Plans that dictate cities' policies on issues like land use, housing, noise, etc. These results, which draw on data from California's Annual Planning Survey give no clear indication that the election of a nonwhite councilperson generates a change on this front.

Appendix Table A8: Likelihood of adopting a revision to City Plans

Dep. Var.	Num. Changes (1)	Any Change (2)	Land Use (3)	Circulation (4)	Housing (5)
Nonwht. Winner X Post	-0.064	-0.036	-0.030	-0.039	-0.043
	(0.343)	(0.092)	(0.062)	(0.062)	(0.092)
Mean	0.49	0.21	0.06	0.07	0.15
Dep. Var.	Open Space (6)	Conservation (7)	Safety (8)	Noise (9)	
Nonwht. Winner X Post	0.017	0.003	0.001	0.029	
	(0.059)	(0.058)	(0.055)	(0.057)	
Mean	0.06	0.06	0.05	0.05	

Notes: Sample contains 669 observations across 149 cities. Robust standard errors (clustered at the city level) reported in parentheses. Specifications mirror Table A7, see those table notes for details.

Table A9 draws on building permit data to tests whether the election of a nonwhite candidate impacts the number (or types) of building permits issues. We see no clear change in city-wide permitting behavior following the election of a nonwhite city councilmember.

Appendix Table A9: Impact on residential building permit activity

Dep. Var:	Single Family Permits (per 10k)	Multi Family Permits (per 10k)	Any multi-family permits issued	Any commercial permits issued	Any Industrial permits issued
	(1)	(2)	(3)	(4)	(5)
Nonwhite winner	1.375	5.012	-0.060	0.208	-0.018
X Post	(12.222)	(6.767)	(0.113)	(0.133)	(0.078)
Mean	25.364	11.704	0.493	0.668	0.231
Num. Cities	132	132	133	133	132
Observations	667	667	669	669	667

Notes: Robust standard errors (clustered at the city level) reported in parentheses. Specifications mirror Table A7, see those table notes for details