

(APPENDIX) Nuanced Accountability:

Voter Responses to Service Delivery in Southern Africa

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## 1. DEFINITIONS AND DESCRIPTIVE STATISTICS

In the following tables we present the descriptive summary statistics for both the aggregate and individual level variables. We first present the names of variables and their precise definitions for ease of interpretation.

### 1.1. AGGREGATE-LEVEL VARIABLES

Table 1: Aggregate data variable names and definitions

Variable name	Definition
water_ch10	Change in the proportion of households that have piped water into their home (2001-2011)
flush_ch10	Change in the proportion of households that have fully or partially flushing toilets (2001-2011)
refuse_ch10	Change in the proportion of households that have refuse collected weekly (2001-2011)
sd_means_ch10	Change in the mean of water, toilets, and refuse coverage (2001-2011)
lgeanc_vs_ch10	Change in ANC vote share in local elections (2000-2011)
npeanc_vs_ch10	Change in ANC vote share in local elections (1999-2009)
log_income_ch10	Change in log average income (2001-2011)
unempfrac_ch10	Change in broad unemployment fraction (2001-2011)
log_pop_ch10	Change in log population (2001-2011)
femalefrac_ch10	Change in female fraction (2001-2011)
whitefrac_ch10	Change in White fraction (2001-2011)
employment_broad2001	Broad unemployment fraction (2001)
log_income2001	Log average income (2001)
log_pop2001	Log population (2001)
female2001	Female fraction (2001)
white_frac2001	White fraction (2001)
share_area_all_tbvc_ta	Share of ward that is in traditional authority area

Table 2: Summary statistics ward-level aggregate data

Statistic	N	Mean	St. Dev.	Min	Max
water_ch10	2,972	0.107	0.123	-0.233	0.845
flush_ch10	2,972	0.090	0.181	-0.667	1.008
refuse_ch10	2,972	0.065	0.192	-0.777	1.000
sd_means_ch10	2,972	0.087	0.123	-0.237	0.809
lgeanc_vs_ch10	2,885	0.074	0.172	-0.746	0.855
npeanc_vs_ch10	2,908	0.034	0.175	-0.512	0.692
log_income_ch10	2,972	0.956	0.371	-1.677	2.749
unempfrac_ch10	2,972	0.055	0.060	-0.730	0.334
log_pop_ch10	2,972	0.072	0.293	-1.222	2.968
femalefrac_ch10	2,972	-0.008	0.017	-0.167	0.147
whitefrac_ch10	2,972	-0.001	0.026	-0.338	0.192
log_income2001	2,972	5.890	0.670	4.234	9.003
employment_broad2001	2,972	0.233	0.163	0.014	0.870
log_pop2001	2,972	9.062	0.481	5.743	10.626
sex2001	2,972	0.529	0.034	0.169	0.625
white_frac2001	2,972	0.029	0.076	0.000	0.714
share_area_all_tbvc_ta	2,972	0.457	0.451	0.000	1.000

Note: This excludes the top quintile of baseline service delivery.

## 1.2. INDIVIDUAL-LEVEL VARIABLES

Table 3: Afrobarometer variable names and definitions

Variable	Question
ownwater	Please tell me whether each of the following are available inside your house, inside your compound, or outside your compound: your main source of water for household use?
owntoilet	Please tell me whether each of the following are available inside your house, inside your compound, or outside your compound: A toilet or latrine
ea_water	Are the following services present in the primary sampling unit/enumeration area: Piped water system that most houses could access? (enumerator coded)
ea_sewer	Are the following services present in the primary sampling unit/enumeration area: Sewage system that most houses could access? (enumerator coded)
urban	Urban or Rural Primary Sampling Unit (enumerator coded)
female	Gender (enumerator coded)
age	How old are you?
cashjob	Do you have a job that pays a cash income? If yes, is it full-time or part-time? If no, are you presently looking for a job?
educ	What is the highest level of education you have completed?
ownliving	In general, how would you describe: Your own present living conditions?
liv_compoth	In general, how do you rate your living conditions compared to those of other South Africans?
govt_watsanit	How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say: Providing water and sanitation services?
loc_govt_refuse	What about local government? I do not mean the national government. I mean your municipal or local government council. How well or badly would you say your local government is handling the following matters, or haven't you heard enough about them to say: Keeping our community clean, for example, by having refuse removed?
prez_rate	Do you approve or disapprove of the way the following people have performed their jobs over the past twelve months, or haven't you heard enough about them to say: President [Name]?
loc_coun_rate	Do you approve or disapprove of the way the following people have performed their jobs over the past twelve months, or haven't you heard enough about them to say: Your elected local government councilor?
PARTY_vote	If a presidential election were held tomorrow, which party's candidate would you vote for?

Table 4: Summary statistics Afrobarometer Rounds 2, 2.5, 3, 4, 5 (South Africa)

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>N</b>
ownwater	0.646	0.418	0	1	4799
owntoilet	0.742	0.315	0	1	2395
ea_water	0.788	0.409	0	1	11991
ea_sewer	0.642	0.479	0	1	11991
urban	0.638	0.48	0	1	11991
female	0.498	0.5	0	1	11991
age	38.82	15.467	18	97	11837
cashjob	0.341	0.442	0	1	11961
educ	0.49	0.18	0	1	11974
ownliving	0.49	0.307	0	1	11930
liv_compoth	0.539	0.264	0	1	11727
govt_watsanit	0.553	0.332	0	1	11782
loc_govt_refuse	0.489	0.329	0	1	6974
prez_rate	0.566	0.309	0	1	11322
loc_coun_rate	0.461	0.3	0	1	10329
anc_vote	0.505	0.5	0	1	11991

Note: Most variables were re-scored on 0-1 scale.

See afrobarometer.org for original questionnaires and response categories.

Table 5: Summary statistics Afrobarometer Rounds 3, 4, 5 (Botswana)

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>N</b>
ownwater	0.468	0.343	0	1	2400
owntoilet	0.665	0.282	0	1	1196
ea_water	0.903	0.297	0	1	3600
ea_sewer	0.301	0.459	0	1	3600
urban	0.398	0.49	0	1	3600
female	0.5	0.5	0	1	3600
age	38.86	17.064	18	99	3582
cashjob	0.248	0.414	0	1	3597
educ	0.4	0.239	0	1	3596
ownliving	0.354	0.268	0	1	3593
liv_compoth	0.422	0.259	0	1	3516
govt_watsanit	0.59	0.254	0	1	3561
loc_govt_refuse	0.546	0.294	0	1	3535
prez_rate	0.698	0.287	0	1	3436
loc_coun_rate	0.505	0.292	0	1	3396
bdp_vote	0.576	0.494	0	1	3600

Note: Most variables were re-scored on 0-1 scale.

See afrobarometer.org for original questionnaires and response categories.



Table 6: Summary statistics Afrobarometer Round 3 (Lesotho)

Variable	Mean	Std. Dev.	Min.	Max.	N
ownwater					0
owntoilet					0
ea_water	0.662	0.473	0	1	1161
ea_sewer	0.069	0.253	0	1	1161
urban	0.345	0.475	0	1	1161
female	0.5	0.5	0	1	1161
age	43.016	18.315	18	100	1155
cashjob	0.108	0.285	0	1	1161
educ	0.302	0.168	0	1	1160
ownliving	0.255	0.282	0	1	1159
liv_compoth	0.405	0.224	0	1	1155
govt_watsanit	0.436	0.359	0	1	1151
loc_govt_refuse	0.373	0.351	0	1	795
prez_rate	0.715	0.334	0	1	1134
loc_coun_rate	0.504	0.325	0	1	798
lcd_vote	0.667	0.472	0	1	1161

Note: Most variables were re-scored on 0-1 scale.

See afrobarometer.org for original questionnaires and response categories.

Table 7: Summary statistics Afrobarometer Rounds 3, 4, 5 (Namibia)

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>N</b>
ownwater	0.364	0.434	0	1	2400
owntoilet	0.415	0.408	0	1	1195
ea_water	0.707	0.455	0	1	3600
ea_sewer	0.375	0.484	0	1	3600
urban	0.393	0.489	0	1	3600
female	0.501	0.5	0	1	3600
age	35.103	14.609	18	105	3595
cashjob	0.335	0.437	0	1	3596
educ	0.44	0.187	0	1	3590
ownliving	0.513	0.302	0	1	3587
liv_compoth	0.509	0.266	0	1	3496
govt_watsanit	0.518	0.309	0	1	3553
loc_govt_refuse	0.538	0.314	0	1	3416
prez_rate	0.773	0.25	0	1	3491
loc_coun_rate	0.577	0.279	0	1	3237
swapo_vote	0.599	0.49	0	1	3600

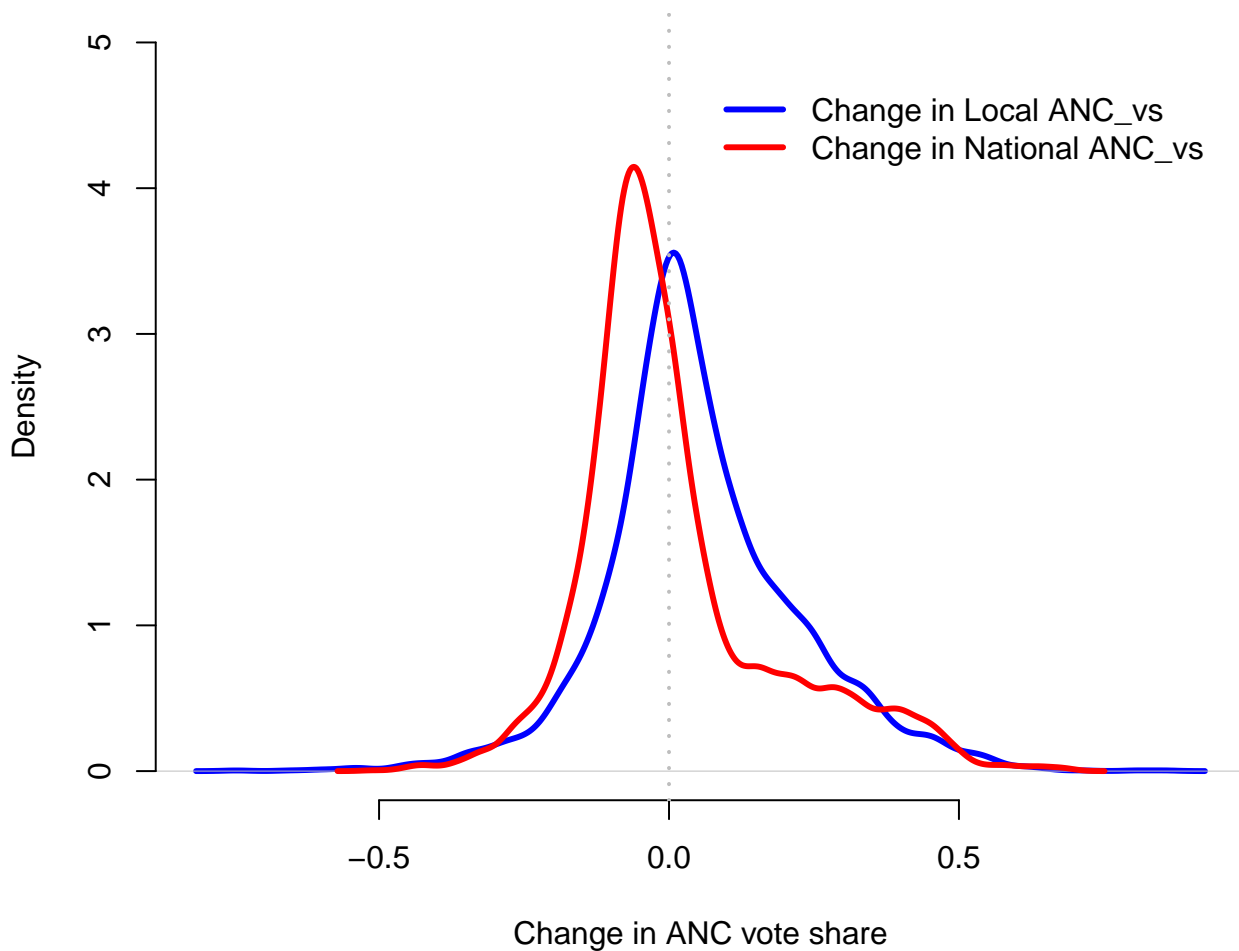
Note: Most variables were re-scored on 0-1 scale.

See afrobarometer.org for original questionnaires and response categories.

## 2. VARIATION IN ANC VOTE SHARE OVER TIME

One issue, in a hegemonic democracy like South Africa, is whether there is sufficient variation in ANC vote share over time. Figure 1 demonstrates that, while the ANC's overall vote share has moved little in the past decades (the means for both national and local are close to zero), there is substantial sub-national variation in change, with some areas swinging dramatically toward the ANC, and others swinging away.

Figure 1: Changes in ANC Vote Share, for Local (2001 to 2011) and National (1999 to 2009) Elections



**Note:** This figure depicts the density of changes in ANC vote share for both national and local elections.

### 3. SPATIAL VARIATION IN TOILETS AND REFUSE COLLECTION

These maps show spatial variation in the change in service provision over time.

Figure 2: South African Water Provision: Change from 2001-2011 (Household Coverage Within Wards)

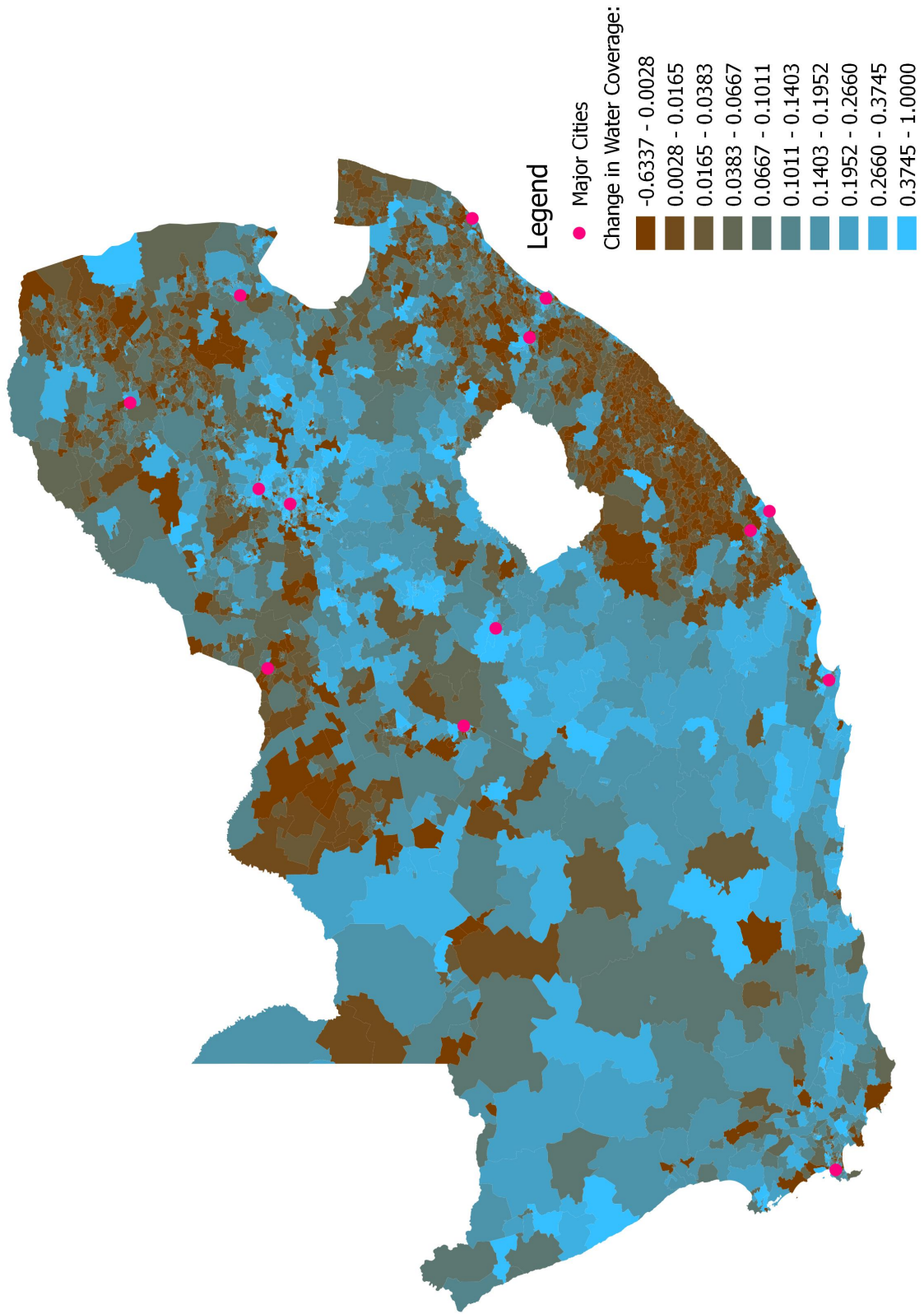


Figure 3: South African Toilet/Sanitation Provision: Change from 2001-2011 (Household Coverage Within Wards)

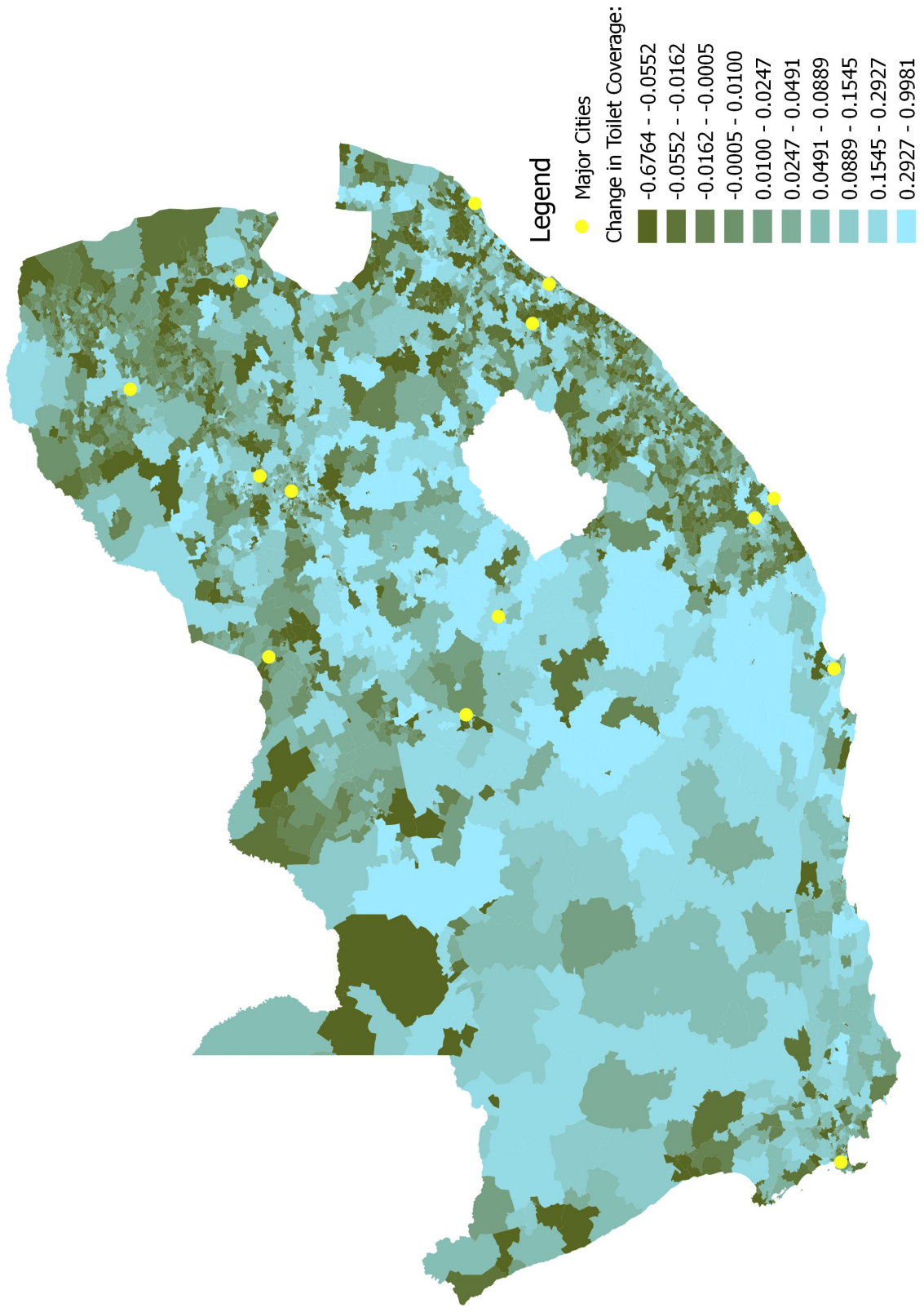
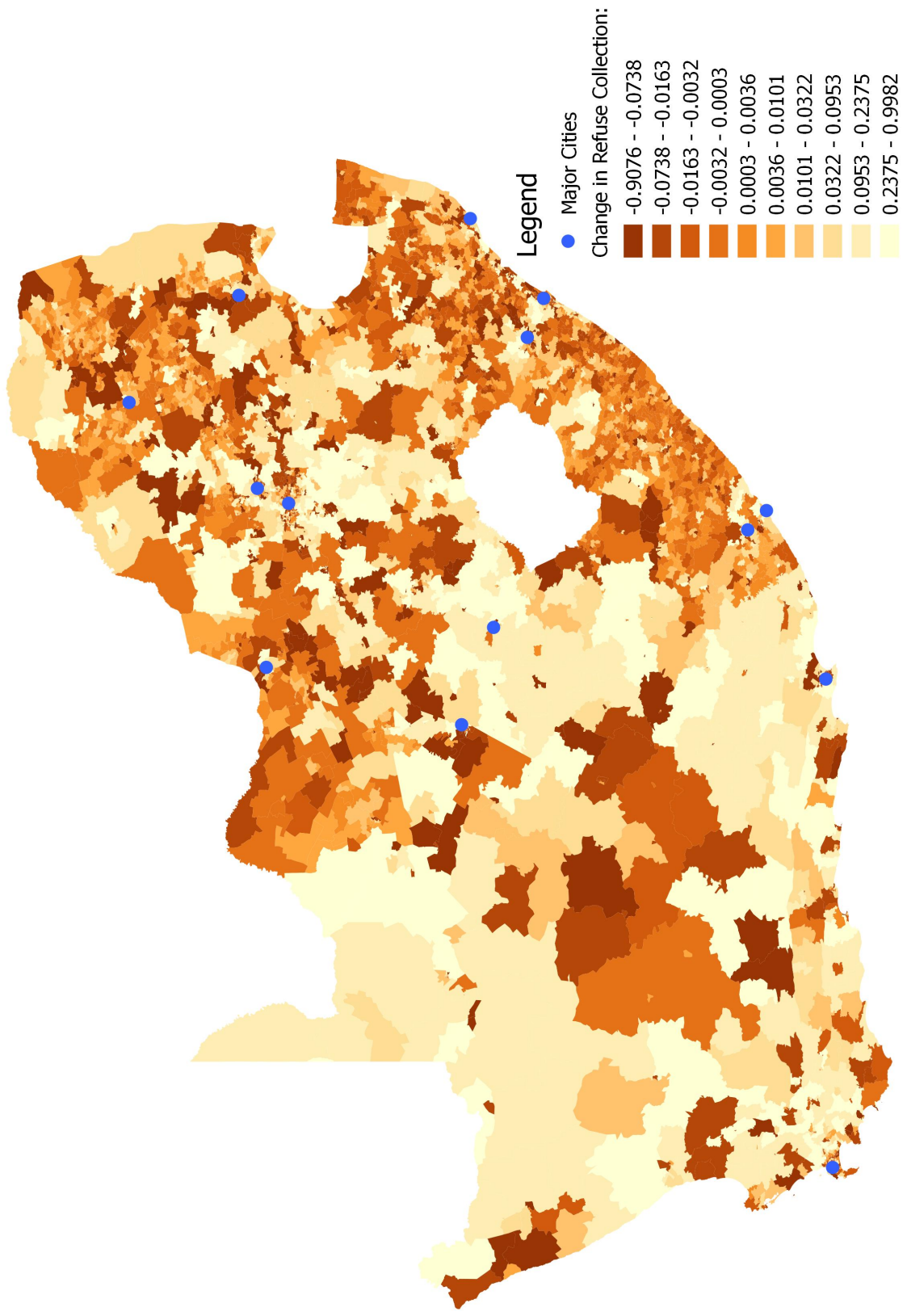


Figure 4: South African Refuse Collection Provision: Change from 2001-2011 (Household Coverage Within Wards)



#### 4. INTERCORRELATION BETWEEN SERVICES AT AGGREGATE-LEVEL

How strongly do different services correlate with each other? In table 8 we show that the correlations between change in various service delivery (excluding the top quintile) is actually quite low, though it varies by service.

Table 8: Do changes in services intercorrelate?

	Water	Toilets	Refuse	Mean SD
Water	1	0.457	0.268	0.698
Toilets	0.457	1	0.262	0.780
Refuse	0.268	0.262	1	0.738
Mean serv. delivery	0.698	0.780	0.738	1



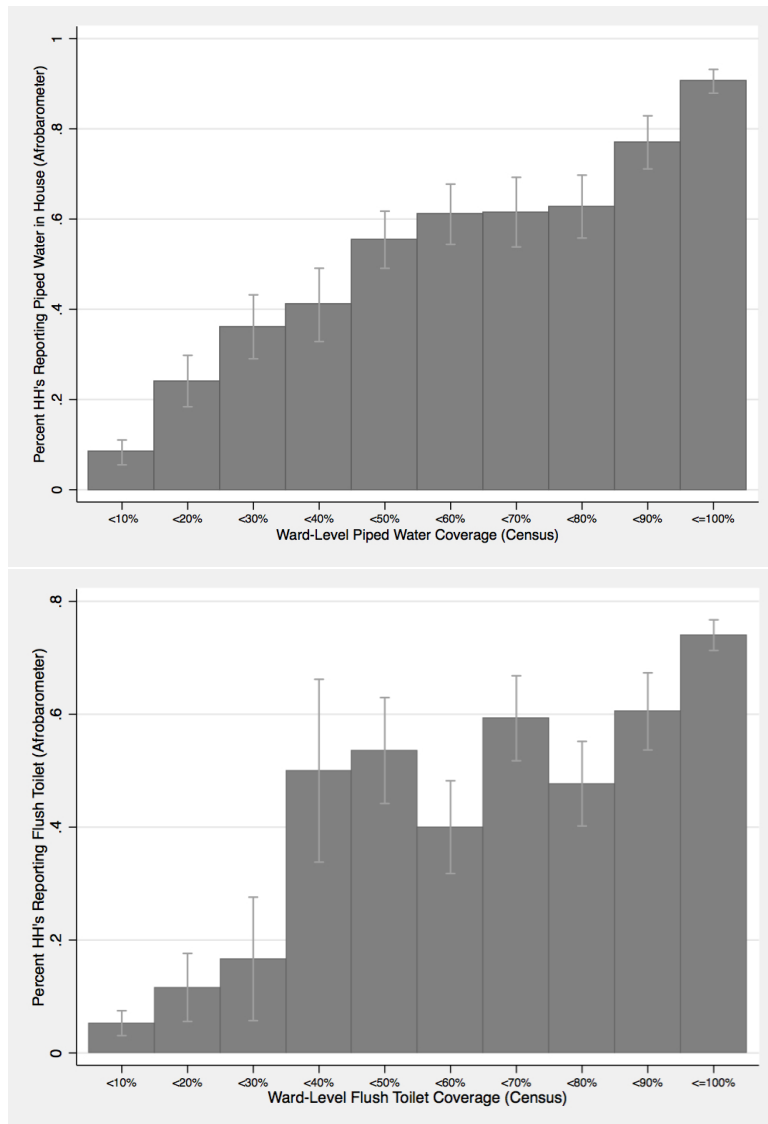
## 5. DATA QUALITY

It is useful to reflect on the quality and credibility of our data more generally. Sandefur and Glassman (2013) cast substantial doubt on various sources of African data by highlighting discrepancies between survey and administrative statistics. Obviously, scholars working in the region must take such concerns seriously; particularly when finding counter-intuitive results one possible explanation must be that the data were bad – poorly measured, intentionally or unintentionally falsified. We agree with Sandefur and Glassman (2013) that an important strategy for assessing the quality of data is to compare independently conducted administrative and household surveys that measure similar items. Having joined several rounds of Afrobarometer data with two rounds of South African census data, we are able to do just that with respect to two important services: access to piped water and toilets.

As shown in figure 5, we grouped the merged data into bins according to the census-reported, ward-level coverage of piped water services and flush toilets, and then for each bin (ranging from zero-to-less than 10 percent coverage to 90-to-100 percent coverage), we plotted the distribution of individual-level responses to Afrobarometer questions about the respective services.

The figure shows plainly that there is a very tight correspondence between the two data sources (of course, the statistical correlations are high and significant, but this portrait is far more nuanced). While of course other problems of measurement reliability and validity may arise, this strong correspondence lends a high degree of credibility to the data sources, and provides an opportunity for us to probe the findings described above with analyses of the Afrobarometer survey data.

Figure 5: Distribution of Individual Afrobarometer Responses to Service Provision Questions by Census-reported Service Coverage



Bars represent the percentage of respondents on the Afrobarometer surveys who said they had listed services inside their house, and lines represent 95 percent confidence intervals, grouped according to each household's location in a ward that was reported on the census to have a particular coverage of that service. Data from 2011 South African census and 2012 Afrobarometer survey.

## 6. TEST FOR SELECTION

We test whether ANC vote share in the baseline period predicts service delivery changes over time. We conduct this test for two samples, which are used for analyses throughout the paper. First, in Panel A of table 9 we show results for the full sample, though note that throughout the paper we drop all wards in which baseline service coverage (for all three relevant service) is above the 80th percentile, to prevent ceiling effects. Second, in Panel B of table 9 we include only competitive wards – those in which baseline ANC vote share was between 30% and 70%.

Table 9: Does baseline ANC vote share predict service delivery changes?

	<b>Dependent Variable:</b>							
	$\Delta$ Water		$\Delta$ Toilets		$\Delta$ Refuse		$\Delta$ Mean ServD	
<b>Panel A: Full Sample (and &lt;80th Percentile Baseline ServD)</b>								
anc_vs1999	0.019*		−0.004		0.046**		0.020*	
	(0.012)		(0.019)		(0.020)		(0.012)	
anc_vs2000		0.015		−0.011		0.032		0.012
		(0.013)		(0.020)		(0.020)		(0.012)
Constant	−0.214*	−0.187*	0.437**	0.452**	0.470**	0.512***	0.231*	0.259**
	(0.110)	(0.111)	(0.176)	(0.177)	(0.189)	(0.191)	(0.123)	(0.124)
Covariates	Y	Y	Y	Y	Y	Y	Y	Y
N	2909	2886	2909	2886	2909	2886	2909	2886
R-squared	0.184	0.184	0.112	0.114	0.065	0.064	0.162	0.161
<b>Panel B: Competitive Wards Only (and &lt;80th Percentile Baseline ServD)</b>								
anc_vs1999	0.007		0.011		0.054*		0.024	
	(0.017)		(0.026)		(0.028)		(0.017)	
anc_vs2000		0.005		0.005		0.046*		0.019
		(0.020)		(0.027)		(0.027)		(0.018)
Constant	−0.248*	−0.250*	0.189	0.181	0.479	0.512*	0.140	0.148
	(0.148)	(0.150)	(0.249)	(0.251)	(0.296)	(0.308)	(0.177)	(0.182)
Covariates	Y	Y	Y	Y	Y	Y	Y	Y
N	979	961	979	961	979	961	979	961
R-squared	0.190	0.192	0.132	0.135	0.045	0.043	0.152	0.151

\*\*\*p < .01; \*\*p < .05; \*p < .1

Standard errors clustered by municipality (234)

## 7. AGGREGATE-LEVEL RESULTS

### 7.1. MAIN RESULTS INCLUDING TOP QUINTILE BASELINE SD

Table 10: Effect of change in service delivery on change on national ANC vote share

	Change in ANC Vote Share (National Elections)					
water_ch10	-0.123*** (0.034)	-0.162*** (0.062)				
flush_ch10			-0.070* (0.041)			
refuse_ch10				-0.094*** (0.019)	-0.129*** (0.030)	-0.082** (0.035)
sd_means_ch10						-0.154** (0.065)
unempfrac_ch10	-0.190*** (0.058)	-0.119 (0.094)	-0.050 (0.101)	-0.100 (0.061)	-0.050 (0.099)	-0.119** (0.061)
log_income_ch10	0.066*** (0.016)	0.069*** (0.023)	0.046** (0.022)	0.049*** (0.015)	0.053** (0.023)	0.057*** (0.059)
log_pop_ch10	0.038*** (0.013)	0.040** (0.019)	0.043** (0.020)	0.042*** (0.013)	0.046** (0.021)	0.041*** (0.016)
femalefrac_ch10	-0.446** (0.196)	-0.307 (0.342)	-0.649*** (0.369)	-0.606*** (0.209)	-0.578 (0.372)	0.045** (0.020)
whitefrac_ch10	-0.599*** (0.081)	-0.648*** (0.140)	-0.628*** (0.135)	-0.605*** (0.079)	-0.646*** (0.137)	-0.547** (0.207)
employment_broad2001	-0.268*** (0.054)	-0.284*** (0.079)	-0.307*** (0.085)	-0.299*** (0.062)	-0.376*** (0.089)	-0.673*** (0.138)
log_income2001	0.060*** (0.013)	0.061*** (0.018)	0.029 (0.019)	0.036*** (0.012)	0.035* (0.021)	-0.333*** (0.084)
log_pop2001	0.014 (0.017)	0.034** (0.015)	0.036** (0.017)	0.016 (0.018)	0.039** (0.018)	0.052*** (0.020)
sex2001	-0.393** (0.154)	-0.329 (0.259)	-0.511* (0.279)	-0.557*** (0.158)	-0.524* (0.280)	0.036** (0.015)
white_frac2001	0.026 (0.032)	-0.085 (0.071)	-0.080 (0.074)	-0.012 (0.032)	-0.107 (0.078)	0.047*** (0.013)
share_area_all_tbvct	0.054*** (0.014)	0.041 (0.028)	0.043 (0.032)	0.042*** (0.015)	0.037 (0.034)	0.015 (0.017)
opp_control	0.186*** (0.023)	0.113*** (0.020)	0.098*** (0.021)	0.174*** (0.024)	0.089*** (0.022)	0.498*** (0.158)
home_water_perc2001	-0.225*** (0.037)	-0.291*** (0.049)				-0.008 (0.117)
all_flush_perc2001			-0.159*** (0.041)			-0.073 (0.073)
refuse_perc2001				-0.112*** (0.020)	-0.136*** (0.038)	0.027 (0.034)
sd_means2001						0.178*** (0.023)
Constant	-0.270 (0.201)	-0.405* (0.223)	-0.127 (0.250)	-0.037 (0.214)	-0.165 (0.256)	-0.220*** (0.050)
Competitive only?		Y	Y		Y	-0.294 (0.243)
N	4057	1154	1154	4057	1154	1154
R-squared	0.364	0.331	0.295	0.353	0.302	0.315

\*\*\*p < .01; \*\*p < .05; \*p < .1  
Standard errors clustered by municipality

Table 11: Heterogeneous effects of change in service delivery on change on national ANC vote: ANC municipalities only

	Change in ANC Vote Share (National Elections)					
water_ch10	-0.128*** (0.035)	-0.173*** (0.058)				
flush_ch10		-0.053*** (0.019)	-0.068* (0.040)			
refuse_ch10				-0.056*** (0.017)	-0.089*** (0.026)	-0.111*** (0.029)
sd_means_ch10						-0.170*** (0.051)
opp-control						
unempfrac_ch10	-0.019 (0.049)	-0.020 (0.097)	0.004 (0.103)	0.004 (0.052)	0.009 (0.100)	-0.009 (0.051)
log_income_ch10	-0.018* (0.014)	-0.027 (0.025)	-0.032 (0.027)	-0.013 (0.014)	-0.024 (0.026)	-0.012 (0.014)
log_pop_ch10	0.045 (0.011)	0.068*** (0.022)	0.072*** (0.022)	0.046*** (0.011)	0.075*** (0.023)	0.046*** (0.011)
femalefrac_ch10	-0.275*** (0.179)	0.151 (0.326)	0.095 (0.341)	-0.252 (0.184)	0.134 (0.339)	0.182 (0.335)
whitefrac_ch10	-0.319*** (0.078)	-0.218 (0.145)	-0.296** (0.143)	-0.404*** (0.078)	-0.330*** (0.146)	-0.280* (0.146)
employment_broad2001	-0.011 (0.056)	-0.067 (0.089)	-0.054 (0.093)	-0.017 (0.056)	-0.006 (0.092)	-0.062 (0.091)
log_income2001	-0.009 (0.011)	-0.019 (0.020)	-0.024 (0.021)	-0.001 (0.010)	-0.017 (0.021)	-0.016 (0.021)
log_pop2001	0.005 (0.008)	0.016 (0.012)	0.015 (0.013)	0.004 (0.009)	0.014 (0.012)	0.014 (0.012)
sex2001	-0.144*** (0.142)	0.088 (0.275)	0.065 (0.292)	-0.169 (0.142)	0.042 (0.288)	0.078 (0.284)
white_frac2001	0.027** (0.028)	0.001 (0.076)	-0.021 (0.077)	0.006 (0.028)	-0.054 (0.079)	-0.029 (0.077)
share_area_all_tbyvc_fa	0.032 (0.014)	0.020 (0.031)	0.024 (0.015)	0.013 (0.034)	0.011 (0.033)	0.008 (0.034)
home_water_perc2001	-0.017 (0.021)	-0.065 (0.041)				
water_ch10:opp-control						
all_flush_perc2001			-0.048*** (0.018)			
flush_ch10:opp-control						
refuse_perc2001						
refuse_ch10:opp-control						
sd_means2001						
sd_means_ch10:opp-control						
Constant	0.073 (0.139)	0.016 (0.218)	0.084 (0.132)	0.044 (0.131)	0.040 (0.222)	0.052 (0.221)
ANC Control Only? Competitive only?	Y	Y	Y	Y	Y	Y
N	2938	722	2938	2938	722	2938
R-squared	0.101	0.146	0.095	0.102	0.150	0.151

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 12: Heterogeneous effects of change in service delivery on change on national ANC vote: Opposition municipalities only

	Change in ANC Vote Share (National Elections)				
water_ch10	-0.252*** (0.066)	-0.221*** (0.082)			
flush_ch10		-0.126*** (0.045)	-0.183** (0.075)		
refuse_ch10			-0.247*** (0.071)	-0.157* (0.092)	-0.186** (0.087)
sd_means_ch10					-0.156 (0.122)
opp_control					
unemfrac_ch10	-0.380*** (0.093)	-0.169 (0.129)	-0.260*** (0.099)	-0.071 (0.153)	-0.244** (0.097)
log_income_ch10	0.142*** (0.024)	0.131*** (0.030)	0.124*** (0.023)	0.107*** (0.035)	0.140*** (0.023)
log_pop_ch10	0.002 (0.019)	0.001 (0.025)	0.015 (0.020)	-0.011 (0.026)	0.019 (0.026)
femalefrac_ch10	0.762*** (0.423)	0.346 (0.639)	0.417 (0.463)	0.250 (0.707)	0.437 (0.681)
whitefrac_ch10	-0.979*** (0.172)	-0.947*** (0.264)	-1.002*** (0.167)	-0.972*** (0.276)	-1.063*** (0.169)
employment_broad2001	-0.370*** (0.112)	-0.264** (0.117)	-0.428*** (0.107)	-0.306** (0.127)	-0.435*** (0.117)
log_income2001	0.120*** (0.025)	0.090*** (0.026)	0.094*** (0.026)	0.056* (0.031)	0.122*** (0.025)
log_pop2001	0.008 (0.024)	0.036* (0.022)	0.004 (0.025)	0.039 (0.026)	0.014 (0.025)
sex2001	0.150* (0.365)	0.142 (0.399)	-0.274 (0.404)	-0.052 (0.480)	-0.082 (0.434)
white_frac2001	-0.125*** (0.085)	-0.207 (0.127)	-0.168* (0.089)	-0.211 (0.142)	-0.197** (0.086)
share_area_all_tbvc_ta	0.137** (0.029)	0.112*** (0.032)	0.139*** (0.031)	0.128*** (0.042)	0.112*** (0.048)
home_water_perc2001	-0.417 (0.061)	-0.439*** (0.065)	(0.031)		
water_ch10_opp_control					
all_flush_perc2001		-0.302*** (0.050)		-0.296*** (0.074)	
flush_ch10_opp_control				-0.254*** (0.044)	-0.221*** (0.056)
refuse_perc2001					
refuse_ch10_opp_control					
sd_means2001					-0.382*** (0.075)
sd_means_ch10_opp_control					
Constant	-0.659* (0.360)	-0.741** (0.369)	-0.208 (0.358)	-0.433 (0.423)	-0.617 (0.428)
Opp Control Only?	Y	Y	Y	Y	Y
Competitive only?					
N	1119	432	1119	432	1119
R-squared	0.589	0.607	0.568	0.565	0.594

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 13: Heterogeneous effects of change in service delivery on change on local ANC vote: ANC municipalities only

	Change in ANC Vote Share (Local Elections)									
water_ch10	-0.053 (0.035)	-0.083 (0.053)								
flush_ch10		0.029 (0.023)	0.042 (0.034)							
refuse_ch10				0.038 (0.024)	-0.010 (0.029)				0.047 (0.033)	0.025 (0.050)
sd_means_ch10										
opp_control										
unempfrac_ch10	-0.051*** (0.076)	-0.042 (0.094)	-0.004 (0.096)	-0.048 (0.079)	-0.007 (0.097)	-0.048 (0.078)	-0.013 (0.097)			
log_income_ch10	0.005 (0.017)	0.037* (0.021)	0.030 (0.022)	-0.0003 (0.016)	0.029 (0.022)	0.004 (0.017)	0.037* (0.022)			
log_pop_ch10	0.033 (0.012)	0.053*** (0.020)	0.059*** (0.020)	0.033*** (0.012)	0.060*** (0.021)	0.033*** (0.012)	0.058*** (0.020)			
femalefrac_ch10	0.240*** (0.227)	0.510* (0.277)	0.392 (0.281)	0.207 (0.226)	0.476* (0.280)	0.209 (0.228)	0.485* (0.281)			
whitefrac_ch10	-0.493*** (0.085)	-0.582*** (0.136)	-0.625*** (0.135)	-0.516*** (0.086)	-0.609*** (0.134)	-0.537*** (0.087)	-0.659*** (0.136)			
employment_broad2001	0.053*** (0.068)	-0.026 (0.082)	0.044 (0.069)	0.044 (0.069)	-0.054 (0.087)	0.041 (0.068)	-0.049 (0.085)			
log_income2001	0.001 (0.016)	-0.004 (0.024)	0.004 (0.015)	-0.011 (0.024)	-0.013 (0.014)	0.004 (0.016)	-0.001 (0.024)			
log_pop2001	0.004 (0.009)	0.002 (0.012)	0.004 (0.009)	0.003 (0.013)	0.002 (0.009)	0.004 (0.009)	0.002 (0.012)			
sex2001	0.016 (0.132)	-0.177 (0.193)	-0.003 (0.130)	-0.271 (0.188)	-0.193 (0.192)	0.011 (0.132)	-0.203 (0.191)			
white_frac2001	-0.090*** (0.031)	-0.360*** (0.080)	-0.095*** (0.033)	-0.388*** (0.080)	-0.396*** (0.078)	-0.090*** (0.032)	-0.400*** (0.078)			
share_area_all_rbyc.ta	0.049* (0.017)	0.054*** (0.018)	0.051*** (0.019)	0.056*** (0.019)	0.041** (0.020)	0.050*** (0.019)	0.043** (0.020)			
home_water_perc2001	-0.021 (0.026)	-0.141*** (0.040)								
water_ch10:opp_control										
all_flush_perc2001		-0.025 (0.021)	-0.063*** (0.029)							
flush_ch10:opp_control										
refuse_perc2001										
refuse_ch10:opp_control				-0.013 (0.020)	-0.086*** (0.026)					
sd_means2001										
sd_means_ch10:opp_control										
Constant	-0.045 (0.136)	0.238 (0.183)	-0.060 (0.127)	-0.027 (0.125)	0.317* (0.171)	-0.060 (0.130)	0.251 (0.178)			
Covariates?	Y	Y	Y	Y	Y	Y	Y			
ANC Control Only?	Y	Y	Y	Y	Y	Y	Y			
Competitive only?										
N	2973	737	2973	2973	737	2973	737			
R-squared	0.055	0.336	0.057	0.057	0.337	0.057	0.341			

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality



Table 14: Heterogeneous effects of change in service delivery on change on local ANC vote: Opposition municipalities only

	Change in ANC Vote Share (Local Elections)			
water_ch10	-0.164*** (0.043)	-0.109* (0.056)		
flush_ch10		-0.085** (0.042)	-0.030 (0.061)	
refuse_ch10				-0.237*** (0.051)
sd_means_ch10				-0.133** (0.062)
opp_control				-0.00001 (0.082)
unempfrac_ch10	-0.239*** (0.079)	-0.042 (0.105)	0.032 (0.122)	-0.118 (0.083)
log_income_ch10	0.110*** (0.020)	0.099*** (0.022)	0.075*** (0.025)	0.106*** (0.019)
log_pop_ch10	0.042 (0.021)	0.098*** (0.028)	0.080* (0.031)	0.054*** (0.020)
femalefrac_ch10	-0.0004 (0.406)	-0.482 (0.548)	-0.557 (0.626)	-0.260 (0.414)
whitefrac_ch10	-0.757*** (0.107)	-1.045*** (0.174)	-1.072*** (0.212)	-0.811*** (0.207)
employment_broad2001	-0.275** (0.096)	-0.208* (0.093)	-0.267*** (0.102)	-0.322*** (0.086)
log_income2001	0.082*** (0.020)	0.050*** (0.018)	0.020 (0.022)	0.080*** (0.019)
log_pop2001	0.010 (0.019)	0.024 (0.028)	0.023 (0.031)	0.012 (0.020)
sex2001	-0.016 (0.332)	-0.360 (0.369)	-0.587 (0.482)	-0.210 (0.423)
white_frac2001	-0.113*** (0.059)	-0.407*** (0.106)	-0.408*** (0.131)	-0.169*** (0.063)
share_area_all_tbc.ta	0.109** (0.025)	0.096*** (0.024)	0.116*** (0.030)	0.091*** (0.031)
home_water_perc2001	-0.330 (0.048)	-0.340*** (0.060)		
water_ch10:opp_control				
all_flush_perc2001		-0.221*** (0.040)	-0.195*** (0.055)	
flush_ch10:opp_control				
refuse_perc2001				-0.195*** (0.032)
refuse_ch10:opp_control				-0.141*** (0.035)
sd_means2001				-0.290*** (0.043)
sd_means_ch10:opp_control				-0.253*** (0.055)
Constant	-0.388 (0.290)	-0.153 (0.358)	0.167 (0.440)	-0.262 (0.397)
Covariates?	Y	Y	Y	Y
Opp Control Only?	Y	Y	Y	Y
Competitive only?				
N	1141	444	444	444
R-squared	0.490	0.586	0.540	0.489

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

## 7.2. MAIN RESULTS WITH NO COVARIATE ADJUSTMENT

The following tables replicate the main results without covariate adjustment. The coefficients are uniformly similar or larger than those presented in the paper.

Table 15: Effect of change in service delivery on change on national ANC vote share, No Covariates

	Change in ANC Vote Share (National Elections)			
water_ch10	-0.295*** (0.051)	-0.458*** (0.095)		
flush_ch10		-0.120*** (0.031)	-0.249*** (0.047)	
refuse_ch10			-0.138*** (0.024)	-0.171*** (0.039)
sd_means_ch10				-0.301*** (0.046)
Constant	0.065*** (0.015)	0.115*** (0.020)	0.044*** (0.013)	0.081*** (0.016)
Covariates?	N	N	N	N
<80th Percentile SD?	Y	Y	Y	Y
Competitive only?				
N	2859	800	2859	800
R-squared	0.040	0.086	0.014	0.041
			0.022	0.035
			0.045	0.092
			0.041	0.092

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 16: Heterogeneous effects of change in service delivery on change on national ANC vote: ANC municipalities only, No Covariates

	Change in ANC Vote Share (National Elections)			
water_ch10	-0.182*** (0.041)	-0.385*** (0.099)		
flush_ch10			-0.082*** (0.020)	-0.148*** (0.048)
refuse_ch10				-0.052*** (0.018)
sd_means_ch10				-0.105*** (0.036)
Constant				-0.158*** (0.035)
Covariates?				-0.014 (0.009)
<80th Percentile SD?	-0.009 (0.010)	0.060*** (0.022)	-0.021** (0.008)	0.030* (0.016)
ANC Control Only?	Y	Y	Y	Y
Competitive only?	Y	Y	Y	Y
N	2179	564	2179	564
R-squared	0.038	0.076	0.016	0.022

\*\*\*p < .01; \*\*p < .05; \*p < .1  
Standard errors clustered by municipality

Table 17: Heterogeneous effects of change in service delivery on change on national ANC vote: Opposition municipalities only, No Covariates

	Change in ANC Vote Share (National Elections)			
water_ch10	-0.616*** (0.125)	-0.681*** (0.174)		
flush_ch10			-0.214*** (0.076)	-0.427*** (0.076)
refuse_ch10				-0.434*** (0.095)
sd_means_ch10				-0.379*** (0.099)
Constant	0.296*** (0.019)	0.256*** (0.020)	0.253*** (0.017)	0.212*** (0.018)
Covariates?	N	N	N	N
<80th Percentile SD?	Y	Y	Y	Y
Opp Control Only?	Y	Y	Y	Y
Competitive only?	Y	Y	Y	Y
N	680	236	680	236
R-squared	0.132	0.208	0.039	0.123
			0.064	0.075
			680	236
			0.128	0.128
			0.121	0.121
			0.285*** (0.017)	0.285*** (0.017)
			N	N
			Y	Y
			Y	Y
			Y	Y
			Y	Y
			680	236
			0.128	0.128
			0.121	0.121
			0.246*** (0.017)	0.246*** (0.017)
			N	N
			Y	Y
			Y	Y
			Y	Y
			236	236
			0.128	0.128
			0.121	0.121

\*\*\*p < .01; \*\*p < .05; \*p < .1  
Standard errors clustered by municipality

Table 18: Heterogeneous effects of change in service delivery on change on local ANC vote: ANC municipalities only, No Covariates

	Change in ANC Vote Share (Local Elections)	
water_ch10	-0.182*** (0.041)	-0.385*** (0.099)
flush_ch10		-0.082*** (0.020)
refuse_ch10		-0.148*** (0.048)
sd_means_ch10		-0.052*** (0.018)
Constant		-0.105*** (0.036)
Covariates?		-0.158*** (0.035)
<80th Percentile SD?	-0.009 (0.010)	-0.014 (0.014)
ANC Control Only?	Y	Y
Competitive only?	Y	Y
N	2179	2179
R-squared	0.038	0.030
		0.060

\*\*\*p < .01; \*\*p < .05; \*p < .1  
Standard errors clustered by municipality

Table 19: Heterogeneous effects of change in service delivery on change on local ANC vote: Opposition municipalities only, No Covariates

	Change in ANC Vote Share (Local Elections)						
water_ch10	-0.616*** (0.125)	-0.681*** (0.174)					
flush_ch10		-0.214*** (0.076)					
refuse_ch10		-0.427*** (0.076)					
sd_means_ch10		-0.434*** (0.095)					
		-0.379*** (0.099)					
Constant	0.296*** (0.019)	0.253*** (0.017)	0.212*** (0.018)	0.249*** (0.020)	0.190*** (0.021)	-0.704*** (0.121)	-0.831*** (0.141)
Covariates?	N	N	N	N	N	N	N
<80th Percentile SD?	Y	Y	Y	Y	Y	Y	Y
Opp Control Only?	Y	Y	Y	Y	Y	Y	Y
Competitive only?							
N	680	236	236	680	236	680	236
R-squared	0.132	0.208	0.123	0.064	0.075	0.128	0.219

\*\*\*p < .01; \*\*p < .05; \*p < .1  
Standard errors clustered by municipality

### 7.3. INTERACTION SPECIFICATION FOR NATIONAL ELECTIONS

The following table presents the results for national elections, but with changes in service delivery interacted with ANC incumbency status.



Table 20: Heterogeneous effects of change in service delivery on change on national ANC vote share by local incumbent

	Change in ANC Vote Share (National Elections)									
water_ch10	-0.066 (0.042)	-0.097 (0.085)								
flush_ch10			-0.019 (0.046)							
refuse_ch10				-0.054** (0.021)						
sd_means_ch10					-0.081*** (0.028)					
opp_control	0.298*** (0.021)	0.199*** (0.027)	0.272*** (0.017)	0.183*** (0.022)	0.159*** (0.022)	0.264*** (0.019)	0.159*** (0.022)	0.159*** (0.022)	0.159*** (0.022)	-0.047 (0.038)
unemfrac_ch10	-0.183*** (0.071)	-0.004 (0.107)	-0.184** (0.073)	0.040 (0.110)	0.010 (0.113)	-0.144** (0.071)	0.010 (0.113)	0.010 (0.113)	0.010 (0.113)	0.293*** (0.019)
log_income_ch10	0.019 (0.016)	-0.007 (0.027)	0.011 (0.016)	-0.017 (0.028)	-0.002 (0.028)	0.021 (0.017)	-0.002 (0.028)	-0.002 (0.028)	-0.002 (0.028)	0.038 (0.108)
log_pop_ch10	0.032** (0.014)	0.066*** (0.023)	0.028* (0.014)	0.069*** (0.023)	0.067*** (0.014)	0.033** (0.014)	0.067*** (0.014)	0.067*** (0.014)	0.067*** (0.014)	0.073*** (0.028)
femalefrac_ch10	-0.563** (0.201)	-0.396 (0.361)	-0.711*** (0.214)	-0.540 (0.372)	-0.540 (0.372)	-0.630*** (0.209)	-0.540 (0.372)	-0.540 (0.372)	-0.540 (0.372)	0.024 (0.360)
whitefrac_ch10	-0.471*** (0.155)	-0.440** (0.198)	-0.540*** (0.167)	-0.523*** (0.197)	-0.551*** (0.199)	-0.570*** (0.150)	-0.551*** (0.199)	-0.551*** (0.199)	-0.551*** (0.199)	-0.465** (0.189)
employment_broad2001	-0.121* (0.062)	-0.073 (0.089)	-0.137*** (0.066)	-0.075 (0.097)	-0.129** (0.062)	-0.129** (0.063)	-0.132 (0.100)	-0.132 (0.100)	-0.132 (0.100)	-0.082 (0.093)
log_income2001	0.016 (0.015)	-0.014 (0.021)	0.008 (0.015)	-0.024 (0.023)	-0.024 (0.023)	0.021 (0.015)	-0.007 (0.024)	-0.007 (0.024)	-0.007 (0.024)	-0.011 (0.023)
log_pop2001	0.004 (0.013)	0.019 (0.014)	0.005 (0.014)	0.022 (0.012)	0.022 (0.012)	0.008 (0.013)	0.025** (0.012)	0.025** (0.012)	0.025** (0.012)	0.021* (0.012)
sex2001	-0.027 (0.169)	0.126 (0.272)	-0.078 (0.175)	0.072 (0.293)	0.072 (0.293)	-0.091 (0.179)	0.063 (0.298)	0.063 (0.298)	0.063 (0.298)	0.110 (0.285)
white_frac2001	-0.013 (0.074)	-0.097 (0.111)	-0.016 (0.079)	-0.120 (0.110)	-0.120 (0.110)	-0.062 (0.071)	-0.168 (0.115)	-0.168 (0.115)	-0.168 (0.115)	-0.130 (0.111)
share_area_all_tbcv.ta	0.040*** (0.013)	0.018 (0.025)	0.038*** (0.014)	0.015 (0.026)	0.015 (0.026)	0.024* (0.013)	0.004 (0.027)	0.004 (0.027)	0.004 (0.027)	0.007 (0.027)
home_water_perc2001	-0.079** (0.036)	-0.161*** (0.050)								
water_ch10_opp_control	-0.417*** (0.116)	-0.381** (0.158)								
all_flush_perc2001			-0.054** (0.022)	-0.108*** (0.034)	-0.108*** (0.034)					
flush_ch10_opp_control			-0.179*** (0.068)	-0.363*** (0.082)	-0.363*** (0.082)					
refuse_perc2001										
refuse_ch10_opp_control										
sd_means2001										
sd_means_ch10_opp_control										
Constant	-0.131 (0.161)	-0.072 (0.211)	-0.060 (0.166)	-0.003 (0.228)	-0.003 (0.228)	-0.149 (0.158)	-0.112 (0.238)	-0.112 (0.238)	-0.112 (0.238)	-0.097*** (0.031)
<80th Percentile SD?	Y	Y	Y	Y	Y	Y	Y	Y	Y	-0.140*** (0.028)
Competitive only?	Y	Y	Y	Y	Y	Y	Y	Y	Y	-0.500*** (0.144)
N	2859	800	2859	800	800	2859	800	800	800	-0.092 (0.227)
R-squared	0.494	0.379	0.481	0.374	0.374	0.495	0.368	0.368	0.368	0.387

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

#### 7.4. POOLED AND INTERACTED RESULTS FOR LOCAL ELECTIONS

The following three tables replicate the pooled results (that is, including both ANC and non-ANC municipalities) for local elections. These results should be treated with caution as they are hard to interpret without accounting for local incumbency – we may expect ANC and non-ANC municipalities to behave differently.



Table 22: Effect of change in service delivery on change on local ANC vote share

	Change in ANC Vote Share (Local Elections)										
water_ch10	-0.085** (0.035)	-0.169** (0.055)									
flush_ch10			0.021 (0.025)	-0.007 (0.036)							
refuse_ch10					0.013 (0.026)	-0.031 (0.033)					
sd_means_ch10							0.026 (0.037)				-0.038 (0.056)
unempfrac_ch10	-0.221** (0.087)	-0.127 (0.099)	-0.217** (0.089)	-0.092 (0.100)	-0.201** (0.087)	-0.085 (0.100)	-0.206** (0.088)				-0.092 (0.100)
log_income_ch10	0.039** (0.018)	0.059** (0.020)	0.029* (0.017)	0.048** (0.021)	0.028 (0.018)	0.046** (0.021)	0.032 (0.018)				0.055** (0.021)
log_pop_ch10	0.030** (0.015)	0.081** (0.021)	0.028* (0.015)	0.081** (0.020)	0.028* (0.015)	0.085** (0.021)	0.028* (0.015)				0.084** (0.021)
femalefrac_ch10	-0.140 (0.261)	-0.153 (0.301)	-0.241 (0.265)	-0.318 (0.308)	-0.219 (0.265)	-0.300 (0.315)	-0.220 (0.265)				-0.260 (0.311)
whitefrac_ch10	-0.549** (0.147)	-0.437** (0.145)	-0.585** (0.146)	-0.553** (0.142)	-0.598** (0.150)	-0.549** (0.144)	-0.617** (0.148)				-0.569** (0.145)
employment_broad2001	-0.080 (0.071)	-0.136* (0.077)	-0.092 (0.075)	-0.140* (0.078)	-0.093 (0.072)	-0.180** (0.083)	-0.088 (0.072)				-0.158* (0.079)
log_income2001	0.033* (0.017)	0.030 (0.019)	0.022 (0.016)	0.018 (0.020)	0.021 (0.016)	0.015 (0.020)	0.027 (0.017)				0.029 (0.020)
log_pop2001	0.010 (0.012)	0.016 (0.012)	0.011 (0.012)	0.019* (0.012)	0.011 (0.012)	0.021* (0.012)	0.011 (0.012)				0.020 (0.012)
sex2001	0.021 (0.187)	-0.062 (0.199)	-0.032 (0.188)	-0.157 (0.196)	0.003 (0.190)	-0.092 (0.206)	-0.002 (0.190)				-0.081 (0.199)
white_frac2001	-0.083 (0.066)	-0.366** (0.094)	-0.103 (0.068)	-0.411** (0.093)	-0.127* (0.069)	-0.448** (0.096)	-0.112 (0.068)				-0.433** (0.093)
share_area_all_tbvc.ta	0.051** (0.016)	0.047** (0.017)	0.056** (0.017)	0.048** (0.017)	0.048** (0.017)	0.042** (0.018)	0.049** (0.017)				0.038** (0.018)
opp_control	0.179** (0.017)	0.083** (0.014)	0.179** (0.017)	0.083** (0.015)	0.177** (0.017)	0.022 (0.014)	0.179** (0.017)				0.030** (0.014)
home_water_perc2001	-0.119** (0.042)	-0.226** (0.049)									
all_flush_perc2001			-0.051** (0.025)	-0.144** (0.032)							
refuse_perc2001					-0.047** (0.021)	-0.095** (0.026)					
sd_means2001								-0.088** (0.032)			-0.182** (0.039)
Constant	-0.275 (0.175)	-0.124 (0.171)	-0.186 (0.174)	-0.031 (0.181)	-0.202 (0.168)	-0.051 (0.185)	-0.239 (0.173)				-0.130 (0.185)
<80th Percentile SD?	Y	Y	Y	Y	Y	Y	Y				Y
Competitive only?											Y
N	2885	810	2885	810	2885	810	2885				810
R-squared	0.270	0.381	0.268	0.372	0.269	0.366	0.269				0.377

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 23: Heterogeneous effects of change in service delivery on change on local ANC vote share by local incumbent

	Change in ANC Vote Share (Local Elections)					
water_ch10	-0.015 (0.044)	-0.090 (0.071)				
flush_ch10		0.066** (0.027)	0.057 (0.039)	0.037 (0.028)	-0.018 (0.033)	0.095** (0.041)
refuse_ch10						0.030 (0.060)
sd_means_ch10						0.053*** (0.016)
opp_control	0.215*** (0.020)	0.055*** (0.017)	0.051*** (0.016)	0.189*** (0.018)	0.028* (0.015)	-0.075 (0.099)
unemfrac_ch10	-0.213** (0.085)	-0.112 (0.098)	-0.207** (0.088)	-0.186** (0.086)	-0.082 (0.100)	0.052** (0.052)
log_income_ch10	0.039** (0.018)	0.055*** (0.020)	0.030* (0.017)	0.048** (0.018)	0.045** (0.021)	0.088*** (0.021)
log_pop_ch10	0.032** (0.015)	0.083*** (0.021)	0.029** (0.015)	0.031** (0.015)	0.086*** (0.021)	0.088*** (0.021)
femalefrac_ch10	-0.097 (0.259)	-0.126 (0.299)	-0.240 (0.265)	-0.304 (0.308)	-0.295 (0.314)	-0.233 (0.308)
whitefrac_ch10	-0.547*** (0.141)	-0.452*** (0.140)	-0.594*** (0.145)	-0.564*** (0.141)	-0.529*** (0.143)	-0.551*** (0.139)
employment_broad2001	-0.071 (0.070)	-0.127* (0.075)	-0.092 (0.073)	-0.138* (0.076)	-0.178** (0.082)	-0.150* (0.077)
log_income2001	0.033** (0.017)	0.025 (0.019)	0.024 (0.016)	0.019 (0.020)	0.014 (0.020)	0.026 (0.020)
log_pop2001	0.009 (0.011)	0.015 (0.012)	0.012 (0.012)	0.019 (0.012)	0.012 (0.012)	0.019 (0.012)
sex2001	0.024 (0.187)	-0.056 (0.195)	-0.019 (0.187)	-0.170 (0.189)	-0.096 (0.189)	-0.078 (0.195)
white_frac2001	-0.092 (0.063)	-0.370*** (0.095)	-0.102 (0.068)	-0.419*** (0.094)	-0.107 (0.066)	-0.426*** (0.094)
share_area_all_tbcv.ta	0.054*** (0.016)	0.049*** (0.016)	0.058*** (0.017)	0.051*** (0.017)	0.047*** (0.017)	0.040*** (0.017)
home_water_perc2001	-0.110*** (0.041)	-0.216*** (0.048)				
water_ch10_opp_control	-0.360*** (0.091)	-0.210** (0.099)				
all_flush_perc2001						
flush_ch10_opp_control		-0.056** (0.025)	-0.147*** (0.032)			
refuse_perc2001		-0.191*** (0.059)	-0.221*** (0.066)			
refuse_ch10_opp_control				-0.050** (0.021)	-0.096*** (0.026)	-0.175*** (0.039)
sd_means2001				-0.334*** (0.073)	-0.104 (0.075)	-0.282*** (0.103)
sd_means_ch10_opp_control						-0.120 (0.186)
Constant	-0.273 (0.168)	-0.104 (0.170)	-0.224 (0.171)	-0.217 (0.162)	-0.052 (0.188)	Y Y
<80th Percentile SD?	Y	Y	Y	Y	Y	Y
Competitive only?						
N	2885	810	2885	2885	810	Y
R-squared	0.280	0.387	0.274	0.278	0.368	0.385

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

7.5. RESULTS EXCLUDING WESTERN CAPE, KWAZULU-NATAL, AND EASTERN CAPE

Table 24: Effects of change in service delivery on change on national ANC vote, Excluding Western Cape

	Change in ANC Vote Share (National Elections)							
water_ch10	-0.137*	-0.092**	-0.043	-0.077***	-0.050**	-0.137**	-0.078**	
	(0.083)	(0.041)	(0.043)	(0.026)	(0.020)	(0.058)	(0.034)	
flush_ch10			-0.025			0.211***	0.305***	
			(0.022)			(0.019)	(0.019)	
refuse_ch10						0.084	-0.084	
						(0.101)	(0.062)	
sd_means_ch10						-0.041*	-0.008	
						(0.025)	(0.014)	
opp_control	0.204**	0.304***	0.204**	0.190**	0.292***	0.075**	0.039**	
	(0.027)	(0.021)	(0.022)	(0.022)	(0.013)	(0.024)	(0.013)	
unempfrac_ch10	0.050	-0.089	0.090	0.060	-0.070	-0.123	-0.487**	
	(0.102)	(0.062)	(0.102)	(0.108)	(0.064)	(0.195)	(0.197)	
log_income_ch10	-0.046*	-0.014	-0.057**	-0.018	-0.007	-0.275*	-0.399***	
	(0.025)	(0.014)	(0.025)	(0.018)	(0.014)	(0.134)	(0.145)	
log_pop_ch10	0.071***	0.040**	0.074***	0.074***	0.039**	0.052	-0.017	
	(0.023)	(0.013)	(0.023)	(0.025)	(0.013)	(0.058)	(0.058)	
femalefrac_ch10	-0.160	-0.483**	-0.188	-0.195	-0.509***	-0.051**	-0.010	
	(0.333)	(0.191)	(0.337)	(0.338)	(0.195)	(0.020)	(0.012)	
whitefrac_ch10	-0.273	-0.356**	-0.348**	-0.362**	-0.433***	0.009	0.003	
	(0.176)	(0.150)	(0.176)	(0.166)	(0.134)	0.005	0.003	
employment_broad2001	0.045	-0.019	0.067	0.023	-0.020	0.254	-0.004	
	(0.084)	(0.086)	(0.086)	(0.059)	(0.058)	(0.269)	(0.158)	
log_income2001	-0.054***	-0.016	-0.065***	-0.020	-0.006	-0.095	-0.029	
	(0.019)	(0.012)	(0.020)	(0.012)	(0.021)	(0.103)	(0.075)	
log_pop2001	0.009	0.003	0.010	0.012	0.005	0.013	0.029**	
	(0.012)	(0.012)	(0.012)	(0.013)	(0.012)	(0.012)	(0.013)	
sex2001	0.260	0.017	0.277	0.216	-0.028	0.025		
	(0.264)	(0.156)	(0.271)	(0.280)	(0.163)			
white_frac2001	-0.087	-0.027	-0.084	-0.128	-0.041			
	(0.105)	(0.078)	(0.105)	(0.104)	(0.071)			
share_area_all_tbvc_1a	0.019	0.035***	0.017	0.009	0.026*			
	(0.024)	(0.013)	(0.024)	(0.025)	(0.013)			
home_water_perc2001	-0.051	0.003						
	(0.046)	(0.032)						
water_ch10_opp_control	-0.182	-0.200*						
	(0.165)	(0.114)						
all_flush_perc2001			-0.046					
			(0.028)					
flush_ch10_opp_control			-0.274***					
			(0.092)					
refuse_perc2001								
refuse_ch10_opp_control								
sd_means2001								
sd_means_ch10_opp_control								
Constant	0.180	0.047	0.227	0.130	-0.007	-0.063*	-0.043*	
	(0.219)	(0.167)	(0.226)	(0.235)	(0.159)	(0.036)	(0.024)	
Covariates?	Y	Y	Y	Y	Y	-0.373**	-0.291**	
<80th Percentile SD?	Y	Y	Y	Y	Y	0.168	0.126	
Competitive only?	Y	Y	Y	Y	Y	0.019	0.161	
N	766	2793	766	766	2793	766	2793	
R-squared	0.419	0.545	0.425	0.422	0.549	0.432	0.547	

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 25: Effects of change in service delivery on change on local ANC vote, Excluding Western Cape

	Change in ANC Vote Share (Local Elections)										
water_ch10	-0.102 (0.070)	-0.034 (0.043)									
flush_ch10			0.046 (0.038)	0.051* (0.027)							
refuse_ch10										0.038 (0.027)	
sd_means_ch10											0.014 (0.059)
opp_control	0.057*** (0.017)	0.221*** (0.020)	0.062*** (0.015)	0.209*** (0.017)	0.045*** (0.014)	0.208*** (0.018)	0.061*** (0.016)	0.073* (0.039)			
unempfrac_ch10	-0.078 (0.099)	-0.146* (0.084)	-0.148* (0.098)	-0.148* (0.086)	-0.048 (0.100)	-0.133 (0.085)	-0.049 (0.099)	0.224*** (0.018)			
log_income_ch10	0.034* (0.020)	0.015 (0.017)	0.026 (0.021)	0.008 (0.017)	0.023 (0.021)	0.007 (0.017)	0.031 (0.021)	-0.139 (0.085)			
log_pop_ch10	0.084*** (0.021)	0.037*** (0.015)	0.087*** (0.020)	0.033* (0.015)	0.089*** (0.021)	0.034** (0.015)	0.089*** (0.021)	0.011 (0.017)			
femalefrac_ch10	0.071 (0.299)	0.005 (0.257)	-0.032 (0.304)	-0.086 (0.259)	0.005 (0.310)	-0.047 (0.258)	0.012 (0.306)	0.038 (0.258)			
whitefrac_ch10	-0.348*** (0.144)	-0.455*** (0.141)	-0.446*** (0.144)	-0.496*** (0.143)	-0.409*** (0.144)	-0.449*** (0.140)	-0.434*** (0.143)	-0.492*** (0.140)			
employment_broad2001	-0.049 (0.074)	0.011 (0.067)	-0.045 (0.073)	0.0004 (0.068)	-0.065 (0.076)	0.005 (0.068)	-0.057 (0.074)	0.002 (0.068)			
log_income2001	0.003 (0.020)	0.009 (0.020)	-0.004 (0.016)	0.004 (0.016)	-0.007 (0.020)	0.002 (0.015)	0.002 (0.020)	0.008 (0.016)			
log_pop2001	0.008 (0.012)	0.005 (0.011)	0.010 (0.012)	0.006 (0.012)	0.011 (0.012)	0.007 (0.011)	0.011 (0.012)	0.007 (0.011)			
sex2001	0.030 (0.186)	0.078 (0.183)	-0.044 (0.181)	0.060 (0.182)	0.027 (0.188)	0.081 (0.184)	0.022 (0.183)	0.084 (0.183)			
white_frac2001	-0.393*** (0.096)	-0.115* (0.065)	-0.428*** (0.094)	-0.107 (0.070)	-0.448*** (0.096)	-0.103 (0.066)	-0.435*** (0.094)	-0.108* (0.066)			
share_area_all_rbyc.ta	0.051*** (0.016)	0.052*** (0.016)	0.053*** (0.016)	0.057*** (0.017)	0.045*** (0.017)	0.049*** (0.017)	0.044*** (0.016)	0.052*** (0.017)			
home_water_perc2001	-0.151*** (0.049)	-0.042 (0.039)									
water_ch10:opp_control	-0.108 (0.102)	-0.230** (0.093)									
all_flush_perc2001			-0.108*** (0.031)	-0.028 (0.025)							
flush_ch10:opp_control			-0.178** (0.076)	-0.126** (0.061)							
refuse_perc2001											
refuse_ch10:opp_control											
sd_means2001											
sd_means_ch10:opp_control											
Constant	0.047 (0.172)	-0.129 (0.174)	0.104 (0.172)	-0.104 (0.177)	0.088 (0.178)	-0.107 (0.166)	0.088 (0.178)	-0.047 (0.031)			
Covariates?	Y	Y	Y	Y	Y	Y	Y	Y			
<80th Percentile SD?	Y	Y	Y	Y	Y	Y	Y	Y			
Competitive only?	Y	Y	Y	Y	Y	Y	Y	Y			
N	776	2819	776	2819	776	2819	776	2819			
R-squared	0.366	0.302	0.367	0.300	0.360	0.304	0.368	0.305			

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality



Table 26: Effects of change in service delivery on change on national ANC vote, Excluding KwaZulu-Natal

	Change in ANC Vote Share (National Elections)										
water_ch10	-0.106 (0.075)	-0.092*** (0.034)									
flush_ch10			0.005 (0.040)	-0.012 (0.018)							
refuse_ch10								-0.056** (0.026)	-0.039** (0.018)		
sd_means_ch10										-0.069 (0.054)	-0.061** (0.030)
opp_control	0.105** (0.047)	0.141** (0.071)	0.077 (0.047)	0.087 (0.071)	0.047 (0.048)	0.069 (0.059)	0.069 (0.059)	0.047 (0.048)	0.069 (0.059)	0.085* (0.049)	0.121* (0.073)
unempfrac_ch10	-0.059 (0.104)	-0.055 (0.059)	-0.033 (0.106)	-0.061 (0.061)	-0.047 (0.112)	-0.059 (0.063)	-0.059 (0.063)	-0.047 (0.106)	-0.059 (0.106)	-0.033 (0.106)	-0.051 (0.058)
log_income_ch10	-0.030 (0.020)	-0.014 (0.015)	-0.032 (0.028)	-0.013 (0.015)	-0.028 (0.027)	-0.010 (0.015)	-0.010 (0.015)	-0.028 (0.029)	-0.010 (0.015)	-0.027 (0.029)	-0.010 (0.015)
log_pop_ch10	0.073*** (0.025)	0.043*** (0.012)	0.074*** (0.025)	0.041*** (0.012)	0.070*** (0.025)	0.042*** (0.012)	0.042*** (0.012)	0.070*** (0.025)	0.042*** (0.012)	0.074*** (0.026)	0.043*** (0.012)
femalefrac_ch10	-0.404 (0.396)	-0.362** (0.173)	-0.678* (0.406)	-0.510*** (0.184)	-0.643 (0.404)	-0.474** (0.184)	-0.643 (0.404)	-0.474** (0.184)	-0.505 (0.399)	-0.505 (0.399)	-0.409** (0.180)
whitefrac_ch10	-0.266 (0.200)	-0.280** (0.138)	-0.384* (0.197)	-0.387*** (0.145)	-0.371* (0.204)	-0.382*** (0.139)	-0.371* (0.204)	-0.382*** (0.139)	-0.331* (0.197)	-0.331* (0.197)	-0.348** (0.138)
employment_broad2001	-0.156* (0.085)	-0.069 (0.057)	-0.191** (0.096)	-0.084 (0.064)	-0.223** (0.102)	-0.090 (0.065)	-0.223** (0.102)	-0.090 (0.065)	-0.072 (0.059)	-0.072 (0.059)	-0.072 (0.059)
log_income2001	-0.002 (0.026)	0.003 (0.015)	-0.001 (0.026)	0.007 (0.014)	0.002 (0.025)	0.009 (0.014)	0.002 (0.025)	0.007 (0.014)	0.009 (0.014)	0.003 (0.026)	0.008 (0.014)
log_pop2001	0.019 (0.012)	0.003 (0.008)	0.023* (0.013)	0.006 (0.010)	0.025* (0.014)	0.006 (0.010)	0.025* (0.014)	0.006 (0.010)	0.006 (0.010)	0.021* (0.013)	0.004 (0.009)
sex2001	0.287 (0.267)	-0.028 (0.153)	0.171 (0.292)	-0.085 (0.157)	0.204 (0.284)	-0.098 (0.158)	0.204 (0.284)	-0.098 (0.158)	0.246 (0.282)	0.246 (0.282)	-0.075 (0.157)
white_frac2001	0.020 (0.110)	0.032 (0.067)	-0.011 (0.110)	0.023 (0.110)	-0.027 (0.112)	0.010 (0.070)	-0.027 (0.112)	0.010 (0.070)	-0.011 (0.110)	-0.011 (0.110)	0.023 (0.067)
share_area_all_tbvc_fa	0.019 (0.027)	0.035*** (0.012)	0.017 (0.030)	0.032** (0.013)	0.010 (0.031)	0.030** (0.014)	0.010 (0.031)	0.030** (0.014)	0.008 (0.030)	0.008 (0.030)	0.030** (0.013)
home_water_perc2001	-0.110* (0.057)	-0.003 (0.037)									
water_ch10:opp_control	-0.363** (0.149)	-0.525** (0.210)									
all_flush_perc2001			-0.089** (0.037)	-0.042* (0.022)							
flush_ch10:opp_control			-0.272** (0.115)	-0.197 (0.180)							
refuse_perc2001											
refuse_ch10:opp_control					-0.071** (0.035)	-0.039** (0.019)	-0.071** (0.035)	-0.039** (0.019)			
sd_means2001											
sd_means_ch10:opp_control											
Constant	-0.215 (0.246)	-0.051 (0.156)	-0.189 (0.257)	-0.065 (0.154)	-0.226 (0.256)	-0.068 (0.157)	-0.226 (0.256)	-0.068 (0.157)	-0.110** (0.047)	-0.110** (0.047)	-0.047* (0.028)
Covariates?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
<80th Percentile SD?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Competitive only?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	601	2204	601	2204	601	2204	601	2204	601	601	2204
R-squared	0.233	0.124	0.224	0.102	0.220	0.105	0.220	0.105	0.230	0.230	0.115

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 27: Effects of change in service delivery on change on local ANC vote, Excluding KwaZulu-Natal

	Change in ANC Vote Share (Local Elections)					
water_ch10	-0.054 (0.076)	-0.030 (0.041)				
flush_ch10			0.069* (0.040)	0.066** (0.026)	-0.006 (0.037)	0.049* (0.028)
refuse_ch10						
sd_means_ch10						0.053 (0.064) 0.024 (0.038) -0.155 (0.113) 0.015 (0.095) 0.048* (0.015) 0.022 (0.019) 0.086** (0.033) 0.014 (0.014)
opp_control	0.044 (0.034)	0.110 (0.073)	0.017 (0.036)	0.077 (0.061)	-0.018 (0.040)	0.050 (0.056)
unempfrac_ch10	-0.199* (0.113)	-0.159* (0.095)	-0.156 (0.112)	-0.150 (0.096)	-0.173 (0.114)	-0.173* (0.097)
log_income_ch10	0.051** (0.021)	0.023 (0.019)	0.050** (0.021)	0.020 (0.018)	0.039* (0.022)	0.011 (0.018)
log_pop_ch10	0.081** (0.024)	0.035** (0.014)	0.084** (0.023)	0.034** (0.014)	0.085** (0.024)	0.033** (0.014)
femalefrac_ch10	0.151 (0.342)	0.294 (0.276)	-0.172 (0.356)	0.136 (0.285)	-0.146 (0.365)	0.165 (0.361)
whitefrac_ch10	-0.415*** (0.157)	-0.439*** (0.141)	-0.520*** (0.155)	-0.514*** (0.144)	-0.441*** (0.156)	-0.473*** (0.143)
employment_broad2001	-0.139* (0.084)	-0.022 (0.076)	-0.189** (0.087)	-0.042 (0.080)	-0.225** (0.098)	-0.189** (0.088)
log_income2001	0.028 (0.023)	0.026 (0.018)	0.029 (0.023)	0.027 (0.018)	0.014 (0.023)	0.021 (0.018)
log_pop2001	0.012 (0.012)	0.013 (0.010)	0.017 (0.013)	0.018 (0.011)	0.019 (0.014)	0.015 (0.010)
sex2001	0.032 (0.211)	0.077 (0.193)	-0.127 (0.209)	0.029 (0.196)	-0.030 (0.218)	0.059 (0.197)
white_frac2001	-0.282*** (0.100)	-0.071 (0.066)	-0.347*** (0.099)	-0.088 (0.068)	-0.347*** (0.099)	-0.064 (0.068)
share_area_all_rbyc.ta	0.052*** (0.019)	0.052*** (0.017)	0.052*** (0.020)	0.057*** (0.020)	0.045** (0.023)	0.040* (0.020)
home_water_perc2001	-0.242*** (0.058)	-0.057 (0.046)				
water_ch10_opp_control	-0.338** (0.142)	-0.458* (0.243)				
all_flush_perc2001			-0.150*** (0.038)	-0.046* (0.028)		
flush_ch10_opp_control			-0.268*** (0.088)	-0.291* (0.152)		
refuse_perc2001					-0.074** (0.032)	0.0003 (0.024)
refuse_ch10_opp_control					-0.108 (0.138)	-0.256* (0.154)
sd_means2001						
sd_means_ch10_opp_control						-0.176*** (0.046) -0.349*** (0.166) -0.135 (0.205)
Constant	-0.133 (0.191)	-0.309* (0.183)	-0.097 (0.204)	-0.332* (0.181)	-0.067 (0.210)	-0.245 (0.182)
Covariates?	Y	Y	Y	Y	Y	Y
<80th Percentile SD?	Y	Y	Y	Y	Y	Y
Competitive only?	Y	Y	Y	Y	Y	Y
N	608	2226	608	2226	608	2226
R-squared	0.389	0.063	0.388	0.066	0.362	0.068

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 28: Effects of change in service delivery on change on national ANC vote, Excluding Eastern Cape

	Change in ANC Vote Share (National Elections)										
water_ch10	-0.053 (0.094)	-0.021 (0.043)									
flush_ch10			-0.011 (0.065)								
refuse_ch10				-0.008 (0.024)							
sd_means_ch10					-0.079*** (0.029)						
opp_control	0.229*** (0.027)	0.310*** (0.021)	0.206*** (0.023)	0.279*** (0.018)	0.183*** (0.022)	0.275*** (0.020)	-0.080 (0.071)	0.221*** (0.024)	-0.045 (0.041)		
unempfrac_ch10	-0.053 (0.129)	-0.181** (0.083)	-0.010 (0.129)	-0.186** (0.086)	-0.053 (0.129)	-0.140* (0.082)	-0.019 (0.125)	-0.155* (0.080)			
log_income_ch10	0.028 (0.031)	0.033* (0.018)	0.021 (0.032)	0.026 (0.018)	0.038 (0.034)	0.041** (0.019)	0.036 (0.032)	0.040** (0.018)			
log_pop_ch10	0.060** (0.023)	0.018 (0.015)	0.062** (0.024)	0.013 (0.015)	0.063** (0.026)	0.021 (0.014)	0.069** (0.025)	0.020 (0.014)			
femalefrac_ch10	-0.658* (0.388)	-0.646*** (0.219)	-0.815** (0.402)	-0.796*** (0.236)	-0.833** (0.391)	-0.694*** (0.227)	-0.685* (0.385)	-0.653** (0.228)			
whitefrac_ch10	-0.535** (0.208)	-0.546*** (0.158)	-0.616*** (0.212)	-0.589** (0.173)	-0.621*** (0.210)	-0.627*** (0.153)	-0.555** (0.199)	-0.583** (0.156)			
employment_broad2001	-0.133 (0.103)	-0.180*** (0.069)	-0.140 (0.112)	-0.204*** (0.074)	-0.224* (0.116)	-0.201*** (0.071)	-0.158 (0.106)	-0.183** (0.069)			
log_income2001	0.007 (0.025)	0.027* (0.017)	-0.001 (0.027)	0.020 (0.016)	0.019 (0.027)	0.038** (0.016)	0.015 (0.027)	0.035** (0.017)			
log_pop2001	0.018 (0.013)	0.002 (0.014)	0.021 (0.013)	0.003 (0.015)	0.023* (0.013)	0.006 (0.014)	0.021* (0.013)	0.005 (0.014)			
sex2001	0.063 (0.298)	-0.159 (0.167)	-0.032 (0.322)	-0.228 (0.175)	-0.047 (0.329)	-0.250 (0.176)	0.020 (0.311)	-0.186 (0.169)			
white_frac2001	-0.146 (0.118)	-0.047 (0.077)	-0.171 (0.119)	-0.047 (0.084)	-0.233* (0.128)	-0.105 (0.075)	-0.187 (0.121)	-0.075 (0.076)			
share_area_all_rbc.ta	-0.019 (0.026)	0.027* (0.015)	-0.023 (0.027)	0.023 (0.015)	-0.036 (0.027)	0.006 (0.014)	-0.034 (0.027)	0.012 (0.014)			
home_water_perc2001	-0.188*** (0.062)	-0.074* (0.041)									
water_ch10:opp_control	-0.442** (0.173)	-0.439*** (0.118)									
all_flush_perc2001			-0.131*** (0.042)	-0.046* (0.024)							
flush_ch10:opp_control			-0.364*** (0.087)	-0.147* (0.069)							
refuse_perc2001											
refuse_ch10:opp_control					-0.132*** (0.037)	-0.096*** (0.023)					
sd_means2001					-0.211** (0.090)	-0.294*** (0.082)					
sd_means_ch10:opp_control							-0.167*** (0.064)	-0.096*** (0.032)			
Constant	-0.167 (0.223)	-0.115 (0.170)	-0.088 (0.235)	-0.025 (0.175)	-0.195 (0.245)	-0.144 (0.154)	-0.542*** (0.157)	-0.476*** (0.118)			
Covariates?	Y	Y	Y	Y	Y	Y	Y	Y			
<80th Percentile SD?	Y	Y	Y	Y	Y	Y	Y	Y			
Competitive only?	Y	Y	Y	Y	Y	Y	Y	Y			
N	600	2266	600	2266	600	2266	600	2266			
R-squared	0.416	0.537	0.407	0.523	0.405	0.540	0.426	0.540			

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

Table 29: Effects of change in service delivery on change on local ANC vote, Excluding Easternn Cape

	Change in ANC Vote Share (Local Elections)					
water_ch10	-0.095 (0.078)	0.046 (0.047)				
flush_ch10		0.033 (0.043)	0.074** (0.030)			
refuse_ch10				-0.034 (0.038)	0.042 (0.030)	
sd_means_ch10						0.118*** (0.044) 0.218*** (0.019) -0.156 (0.098) 0.030 (0.021) 0.024 (0.015) -0.060 (0.287) -0.601*** (0.146) -0.114 (0.085) 0.032* (0.019) 0.011 (0.011) 0.018 (0.201) -0.107 (0.071) 0.038* (0.016) 0.016 (0.018)
opp_control	0.051*** (0.019)	0.221*** (0.021)	0.195*** (0.017)	0.021 (0.017)	0.193*** (0.019)	
unempfrac_ch10	-0.171 (0.109)	-0.181* (0.099)	-0.179* (0.102)	-0.137 (0.113)	-0.155 (0.099)	
log_income_ch10	0.084*** (0.024)	0.036** (0.021)	0.071*** (0.025)	0.068** (0.027)	0.028 (0.020)	
log_pop_ch10	0.087*** (0.023)	0.024 (0.015)	0.086*** (0.022)	0.087*** (0.024)	0.023 (0.015)	
femalefrac_ch10	-0.258 (0.331)	-0.002 (0.283)	-0.409 (0.342)	-0.438 (0.350)	-0.069 (0.288)	
whitefrac_ch10	-0.467*** (0.147)	-0.586*** (0.145)	-0.578*** (0.150)	-0.542*** (0.151)	-0.560*** (0.149)	
employment_broad2001	-0.196** (0.078)	-0.107 (0.085)	-0.197** (0.082)	-0.251*** (0.086)	-0.123 (0.087)	
log_income2001	0.052** (0.021)	0.036** (0.020)	0.040* (0.022)	0.034 (0.022)	0.027 (0.018)	
log_pop2001	0.015 (0.013)	0.007 (0.012)	0.018 (0.013)	0.020 (0.013)	0.010 (0.012)	
sex2001	0.030 (0.211)	0.011 (0.198)	-0.112 (0.207)	-0.076 (0.222)	-0.021 (0.201)	
white_frac2001	-0.443*** (0.107)	-0.105 (0.069)	-0.476*** (0.108)	-0.507*** (0.074)	-0.106 (0.110)	
share_area_all_rbc.ta	0.027 (0.017)	0.042** (0.019)	0.027 (0.018)	0.022 (0.018)	0.034* (0.020)	
home_water_perc2001	-0.234*** (0.052)	-0.089* (0.046)				
water_ch10:opp_control	-0.171 (0.109)	-0.380*** (0.092)				
all_flush_perc2001			-0.152*** (0.034)	-0.038 (0.027)		
flush_ch10:opp_control			-0.170** (0.074)	-0.166*** (0.061)		
refuse_perc2001					-0.093*** (0.026)	
refuse_ch10:opp_control					-0.013 (0.067)	
sd_means2001						-0.180*** (0.041) 0.035) -0.463*** (0.110) -0.269 (0.176) Y Y
sd_means_ch10:opp_control						
Constant	-0.296 (0.190)	-0.264 (0.183)	-0.173 (0.204)	-0.160 (0.204)	-0.206 (0.168)	
Covariates?	Y	Y	Y	Y	Y	
<80th Percentile SD?	Y	Y	Y	Y	Y	
Competitive only?	Y	Y	Y	Y	Y	
N	610	2291	610	610	2291	2291
R-squared	0.387	0.298	0.379	0.363	0.295	0.380

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Standard errors clustered by municipality

## 8. INDIVIDUAL-LEVEL RESULTS

The following tables present the main individual-level results for South Africa as well as some additional results. These provide the regression coefficients that underpin the graphical presentation in the paper.

Note that for results in which we include aggregate-level service delivery data as a regressor, we make a further adjustment such that variables capture service delivery to *only* the non-White population, rather than the total population of an area. To do this we apply the following general formula:

$$ServiceNonWhite_i = \frac{(Service_i - WhiteFrac_i)}{(1 - WhiteFrac_i)}$$

Where  $i$  indicates an aerial unit (municipality or ward),  $Service$  is a given service (water, toilets, refuse), and  $WhiteFrac$  is the proportion of the population that is White (from 0 to 1). This function assumes that all Whites in any area typically have access to services, and so subtracts from the proportion of households covered in the census the proportion that are White. We then subtract the proportion Whites from the denominator too, such that the returned value for unit  $i$  is the proportion of non-White households with service coverage.

We make this adjustment because the assumption holds – White households in South Africa are highly likely to have access to running water, good sanitation, and regular refuse removal. In 2001, 95.7 percent of Whites had piped water inside yard or dwelling, 98.7 percent of Whites had flush toilets, and 92.2 percent of Whites had refuse removed by a local authority at least once a week.<sup>1</sup> We are interested in studying those aspects of government service provision that are likely to change – services for White households largely cannot, because they were already being provided.<sup>2</sup>

### 8.1. BLACK RESPONDENTS ON AFROBAROMETER SURVEY, RESTRICTED TO ANC-CONTROLLED MUNICIPALITIES

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<sup>1</sup>Author analyses of the publicly available Census 2001 10% sample using nesstar, available at [statssa.gov.za](http://statssa.gov.za).

<sup>2</sup>The statistical significance of our results is actually not sensitive to this choice, but we feel these variables are more precise measures of the concept of interest.

Table 30: OLS estimates of effect of Household water access

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
ownwater	0.085*** (0.025)	0.060*** (0.017)	0.018 (0.021)	0.009 (0.026)	-0.097*** (0.029)
wave906	0.061* (0.032)	0.070*** (0.020)	-0.061*** (0.020)	-0.106*** (0.030)	0.128*** (0.035)
urban	0.010 (0.028)	0.047** (0.020)	-0.002 (0.021)	-0.001 (0.026)	0.041 (0.030)
female	-0.005 (0.011)	0.005 (0.009)	0.003 (0.011)	0.007 (0.012)	0.001 (0.018)
cashjob	0.032 (0.022)	0.052** (0.021)	0.052** (0.023)	0.042** (0.018)	-0.006 (0.028)
educ	0.135*** (0.050)	0.141** (0.066)	-0.055 (0.046)	-0.083* (0.043)	-0.107 (0.073)
age	-0.0003 (0.0004)	-0.001 (0.001)	0.0001 (0.0004)	0.001 (0.001)	-0.0001 (0.001)
home_zulu	-0.008 (0.024)	0.012 (0.021)	0.015 (0.030)	-0.032 (0.034)	-0.018 (0.039)
home_xhosa	-0.027 (0.027)	-0.006 (0.031)	0.019 (0.032)	0.019 (0.028)	-0.005 (0.054)
Constant	0.403*** (0.044)	0.271*** (0.055)	0.403*** (0.046)	0.538*** (0.042)	0.632*** (0.065)
N	2558	2585	2333	2428	2596
R-squared	0.169	0.144	0.183	0.194	0.133

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 31: OLS estimates of effect of Enumeration Area water access

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_water	0.075*** (0.016)	0.047*** (0.017)	0.008 (0.013)	-0.017 (0.019)	0.002 (0.019)
wave904	0.021 (0.020)	-0.012 (0.018)	-0.183*** (0.020)	0.014 (0.021)	-0.103*** (0.022)
wave905	-0.086*** (0.023)	-0.101*** (0.024)	-0.090*** (0.017)	-0.155*** (0.023)	-0.230*** (0.032)
wave906	-0.035 (0.029)	-0.030 (0.029)	-0.163*** (0.018)	-0.274*** (0.024)	-0.105*** (0.029)
urban	0.039** (0.015)	0.044*** (0.016)	0.033** (0.015)	0.007 (0.018)	0.009 (0.021)
female	0.001 (0.007)	0.006 (0.006)	0.001 (0.007)	-0.0005 (0.008)	0.006 (0.013)
cashjob	0.026* (0.014)	0.052*** (0.014)	0.044*** (0.015)	0.025** (0.013)	-0.043** (0.020)
educ	0.099** (0.038)	0.129*** (0.041)	0.002 (0.030)	0.007 (0.037)	-0.013 (0.053)
age	-0.0002 (0.0003)	-0.001*** (0.0003)	0.0004 (0.0002)	0.0004 (0.0003)	0.0002 (0.0004)
home_zulu	-0.014 (0.022)	-0.010 (0.016)	0.028 (0.021)	-0.022 (0.024)	-0.031 (0.020)
home_xhosa	-0.011 (0.017)	-0.008 (0.018)	0.026 (0.022)	0.026 (0.016)	0.022 (0.023)
Constant	0.447*** (0.034)	0.349*** (0.039)	0.454*** (0.035)	0.684*** (0.032)	0.834*** (0.044)
N	5237	5275	4830	5087	5298
R-squared	0.121	0.096	0.126	0.198	0.091

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 32: OLS estimates of effect of Municipal Water Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
home_water_nonwhite	-0.019 (0.080)	-0.227*** (0.051)	-0.085 (0.076)	-0.072 (0.097)	-0.087 (0.080)
wave906	-0.042* (0.023)	-0.005 (0.022)	-0.125*** (0.020)	-0.257*** (0.028)	-0.120*** (0.033)
urban	0.116*** (0.022)	0.069*** (0.020)	0.015 (0.021)	0.019 (0.025)	0.002 (0.023)
female	0.019* (0.010)	0.005 (0.007)	-0.005 (0.012)	0.001 (0.012)	-0.002 (0.014)
cashjob	0.058*** (0.018)	0.065*** (0.020)	0.020 (0.019)	0.047*** (0.017)	-0.039 (0.029)
educ	0.094 (0.064)	0.119* (0.062)	0.111* (0.064)	0.062 (0.080)	-0.171** (0.078)
age	-0.0005 (0.0004)	-0.001*** (0.0004)	0.001 (0.0004)	0.0003 (0.0005)	0.001 (0.001)
home_zulu	-0.003 (0.027)	-0.054** (0.022)	0.040* (0.023)	0.019 (0.027)	-0.144*** (0.023)
home_xhosa	-0.057*** (0.019)	-0.091*** (0.017)	-0.035** (0.018)	0.025 (0.020)	-0.035 (0.026)
Constant	0.475*** (0.042)	0.537*** (0.041)	0.504*** (0.049)	0.643*** (0.052)	0.957*** (0.060)
N	2651	2665	2435	2530	2676
R-squared	0.050	0.050	0.063	0.170	0.050

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 33: OLS estimates of effect of Ward Water Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
w_home_water_ward_nonwhite	0.068* (0.036)	0.006 (0.032)	-0.018 (0.033)	-0.042 (0.034)	-0.066 (0.044)
wave906	-0.055*** (0.018)	-0.034** (0.016)	-0.129*** (0.017)	-0.256*** (0.017)	-0.114*** (0.022)
districtcode	0.0001 (0.001)	-0.0004 (0.001)	0.001* (0.001)	0.002*** (0.001)	0.001 (0.001)
w_log_pop_ward	-0.014 (0.015)	-0.024* (0.013)	-0.016 (0.014)	-0.007 (0.014)	-0.048*** (0.017)
urban	0.100*** (0.019)	0.035** (0.016)	-0.002 (0.017)	0.003 (0.017)	0.008 (0.020)
female	0.018 (0.011)	0.005 (0.011)	-0.006 (0.012)	0.001 (0.011)	-0.002 (0.014)
cashjob	0.055*** (0.017)	0.060*** (0.016)	0.018 (0.018)	0.045** (0.018)	-0.038 (0.023)
educ	0.091 (0.058)	0.132** (0.053)	0.115** (0.058)	0.065 (0.055)	-0.151** (0.068)
age	-0.001 (0.0005)	-0.001*** (0.0004)	0.0005 (0.0004)	0.0003 (0.0004)	0.001* (0.0005)
home_zulu	-0.005 (0.020)	-0.064*** (0.018)	0.040** (0.018)	0.021 (0.018)	-0.133*** (0.025)
home_xhosa	-0.057*** (0.020)	-0.096*** (0.017)	-0.028 (0.017)	0.038** (0.017)	-0.031 (0.023)
Constant	0.600*** (0.131)	0.745*** (0.117)	0.612*** (0.128)	0.659*** (0.125)	1.353*** (0.150)
N	2651	2665	2435	2530	2676
R-squared	0.052	0.044	0.064	0.173	0.054

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 34: OLS estimates of effect of Municipal Refuse Collection Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
refuse_nonwhite	0.137** (0.056)	-0.116*** (0.025)	-0.024 (0.034)	-0.039 (0.046)	-0.026 (0.045)
urban	0.087*** (0.032)	0.072*** (0.020)	0.006 (0.021)	0.017 (0.026)	-0.007 (0.023)
female	0.006 (0.015)	0.005 (0.007)	-0.009 (0.013)	-0.006 (0.012)	-0.005 (0.014)
cashjob	0.056** (0.027)	0.060*** (0.021)	-0.006 (0.019)	0.001 (0.018)	-0.062** (0.029)
educ	0.292*** (0.076)	0.168** (0.074)	0.347*** (0.052)	0.528*** (0.072)	0.051 (0.062)
age	0.0002 (0.001)	-0.001*** (0.0004)	0.001*** (0.0004)	0.002*** (0.0004)	0.001** (0.001)
home_zulu	0.012 (0.034)	-0.062** (0.025)	0.023 (0.019)	-0.007 (0.020)	-0.159*** (0.028)
home_xhosa	-0.102*** (0.039)	-0.090*** (0.017)	-0.036* (0.018)	0.025 (0.024)	-0.034 (0.026)
Constant	0.224*** (0.051)	0.501*** (0.041)	0.302*** (0.038)	0.253*** (0.044)	0.763*** (0.044)
N	1316	2665	2435	2530	2676
R-squared	0.113	0.047	0.028	0.052	0.031

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 35: OLS estimates of effect of Ward Refuse Collection Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
w_refuse_ward_nonwhite	0.136*** (0.037)	0.016 (0.024)	-0.017 (0.028)	-0.074** (0.029)	-0.036 (0.032)
districtcode	0.003*** (0.001)	-0.0004 (0.001)	0.002*** (0.001)	0.003*** (0.001)	0.001* (0.001)
w_log_pop_ward	-0.004 (0.019)	-0.027** (0.013)	-0.027* (0.014)	-0.028* (0.015)	-0.060*** (0.017)
urban	0.048* (0.028)	0.028 (0.019)	0.0001 (0.023)	0.029 (0.024)	0.011 (0.026)
female	0.006 (0.016)	0.004 (0.011)	-0.009 (0.012)	-0.006 (0.011)	-0.005 (0.014)
cashjob	0.049** (0.024)	0.054*** (0.016)	-0.007 (0.018)	0.002 (0.020)	-0.060*** (0.023)
educ	0.265*** (0.068)	0.189*** (0.048)	0.340*** (0.053)	0.518*** (0.053)	0.054 (0.058)
age	-0.0001 (0.001)	-0.001*** (0.0004)	0.001** (0.0004)	0.001*** (0.0004)	0.001*** (0.001)
home_zulu	0.014 (0.024)	-0.066*** (0.018)	0.030* (0.018)	0.004 (0.018)	-0.144*** (0.025)
home_xhosa	-0.076*** (0.027)	-0.096*** (0.017)	-0.025 (0.019)	0.044** (0.022)	-0.028 (0.024)
Constant	0.221 (0.171)	0.721*** (0.115)	0.504*** (0.128)	0.445*** (0.138)	1.275*** (0.156)
N	1316	2665	2435	2530	2676
R-squared	0.132	0.042	0.032	0.063	0.037

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas



Table 36: OLS estimates of effect of Household toilet access

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
owntoilet	0.121** (0.048)	0.034 (0.040)	0.022 (0.057)	0.022 (0.057)	-0.098* (0.053)
urban	0.026 (0.039)	0.064** (0.028)	-0.022 (0.035)	-0.022 (0.035)	0.002 (0.036)
female	0.011 (0.014)	0.002 (0.013)	0.002 (0.017)	0.002 (0.017)	0.003 (0.022)
cashjob	0.022 (0.022)	0.073** (0.031)	0.037 (0.028)	0.037 (0.028)	0.015 (0.034)
educ	0.165** (0.068)	0.123 (0.093)	-0.037 (0.065)	-0.037 (0.065)	-0.106 (0.087)
age	-0.001 (0.001)	-0.001* (0.001)	-0.0004 (0.001)	-0.0004 (0.001)	0.001 (0.001)
home_zulu	-0.008 (0.031)	0.027 (0.056)	0.005 (0.053)	0.005 (0.053)	-0.065 (0.094)
home_xhosa	-0.046 (0.039)	0.018 (0.051)	0.015 (0.039)	0.015 (0.039)	-0.032 (0.076)
Constant	0.236*** (0.064)	0.336*** (0.082)	0.299*** (0.067)	0.299*** (0.067)	0.668*** (0.097)
N	1353	1357	1232	1232	1361
R-squared	0.268	0.202	0.259	0.259	0.180

\*\*\*p < .01; \*\*p < .05; \*p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 37: OLS estimates of effect of Enumeration Area sewer line access

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_sewer	0.055*** (0.019)	0.058*** (0.017)	0.025 (0.016)	0.001 (0.016)	-0.044* (0.023)
wave904	0.021 (0.020)	-0.017 (0.018)	-0.187*** (0.020)	0.011 (0.021)	-0.094*** (0.021)
wave905	-0.082*** (0.023)	-0.102*** (0.024)	-0.093*** (0.017)	-0.158*** (0.023)	-0.223*** (0.032)
wave906	-0.037 (0.028)	-0.037 (0.028)	-0.168*** (0.017)	-0.276*** (0.023)	-0.095*** (0.028)
urban	0.035** (0.016)	0.031* (0.017)	0.023 (0.016)	0.002 (0.017)	0.030 (0.024)
female	0.001 (0.007)	0.006 (0.006)	0.001 (0.007)	-0.001 (0.008)	0.006 (0.013)
cashjob	0.027* (0.014)	0.052*** (0.014)	0.044*** (0.015)	0.024* (0.013)	-0.042** (0.021)
educ	0.098** (0.039)	0.121*** (0.041)	-0.004 (0.029)	0.004 (0.037)	0.001 (0.052)
age	-0.0002 (0.0003)	-0.001*** (0.0003)	0.0003 (0.0002)	0.0003 (0.0003)	0.0002 (0.0004)
home_zulu	-0.013 (0.022)	-0.009 (0.016)	0.028 (0.021)	-0.023 (0.024)	-0.031 (0.020)
home_xhosa	-0.011 (0.016)	-0.007 (0.018)	0.027 (0.022)	0.027* (0.016)	0.021 (0.023)
Constant	0.479*** (0.034)	0.371*** (0.040)	0.459*** (0.035)	0.678*** (0.029)	0.831*** (0.043)
N	5237	5275	4830	5087	5298
R-squared	0.118	0.097	0.127	0.198	0.092

\*\*\*p < .01; \*\*p < .05; \*p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 38: OLS estimates of effect of Municipal Toilet Service Coverage (Percent Households)

	Own Living Model 1	Own Living Model 2	Liv Comp Othrs Model 3	Liv Comp Othrs Model 4	ANC Vote Model 5
all_flush_nonwhite	0.039 (0.041)	-0.155*** (0.030)	-0.058 (0.039)	-0.070 (0.050)	-0.048 (0.048)
wave906	-0.046* (0.024)	-0.031 (0.023)	-0.134*** (0.021)	-0.265*** (0.027)	-0.130*** (0.030)
urban	0.098*** (0.023)	0.083*** (0.020)	0.020 (0.021)	0.032 (0.024)	0.003 (0.024)
female	0.018* (0.010)	0.006 (0.007)	-0.005 (0.012)	0.001 (0.012)	-0.002 (0.015)
cashjob	0.056*** (0.018)	0.068*** (0.020)	0.021 (0.019)	0.049*** (0.017)	-0.039 (0.029)
educ	0.101 (0.066)	0.102* (0.061)	0.106* (0.064)	0.055 (0.081)	-0.176** (0.077)
age	-0.0005 (0.0004)	-0.001*** (0.0004)	0.0005 (0.0004)	0.0003 (0.0005)	0.001 (0.001)
home_zulu	-0.007 (0.027)	-0.055** (0.024)	0.039* (0.023)	0.020 (0.027)	-0.146*** (0.024)
home_xhosa	-0.057*** (0.020)	-0.090*** (0.017)	-0.035** (0.018)	0.025 (0.020)	-0.035 (0.025)
Constant	0.461*** (0.044)	0.565*** (0.041)	0.513*** (0.050)	0.657*** (0.053)	0.965*** (0.059)
N	2651	2665	2435	2530	2676
R-squared	0.051	0.053	0.064	0.172	0.049

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

Table 39: OLS estimates of effect of Ward Toilet Service Coverage (Percent Households)

	Rate service Model 1	Own living Model 2	Rate local gov Model 3	Rate prez Model 4	Vote ANC Model 5
w_all_flush_ward_nonwhite	0.101*** (0.028)	0.009 (0.024)	-0.039 (0.026)	-0.086*** (0.026)	-0.070** (0.031)
wave906	-0.049*** (0.016)	-0.034** (0.015)	-0.130*** (0.016)	-0.259*** (0.016)	-0.122*** (0.022)
districtcode	-0.0001 (0.001)	-0.0005 (0.001)	0.001** (0.001)	0.002*** (0.001)	0.001 (0.001)
w_log_pop_ward	-0.011 (0.015)	-0.024* (0.013)	-0.017 (0.014)	-0.009 (0.013)	-0.051*** (0.017)
urban	0.066*** (0.022)	0.032* (0.019)	0.013 (0.021)	0.036* (0.020)	0.027 (0.023)
female	0.018 (0.011)	0.005 (0.011)	-0.005 (0.012)	0.002 (0.011)	-0.002 (0.014)
cashjob	0.051*** (0.016)	0.059*** (0.016)	0.019 (0.018)	0.049*** (0.018)	-0.036 (0.023)
educ	0.100* (0.057)	0.132** (0.053)	0.113* (0.058)	0.060 (0.055)	-0.159** (0.069)
age	-0.001 (0.0005)	-0.001*** (0.0004)	0.0005 (0.0004)	0.0003 (0.0004)	0.001* (0.0005)
home_zulu	-0.010 (0.020)	-0.065*** (0.018)	0.042** (0.018)	0.025 (0.018)	-0.132*** (0.025)
home_xhosa	-0.058*** (0.019)	-0.096*** (0.017)	-0.027 (0.017)	0.039** (0.017)	-0.030 (0.023)
Constant	0.562*** (0.129)	0.741*** (0.116)	0.623*** (0.129)	0.685*** (0.124)	1.389*** (0.148)
N	2651	2665	2435	2530	2676
R-squared	0.057	0.044	0.065	0.178	0.055

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. ANC-controlled areas

8.2. BLACK RESPONDENTS ON AFROBAROMETER SURVEY, RESTRICTED TO MUNICIPALITIES  
IN WHICH ANC IS NOT IN CONTROL.

Table 40: OLS estimates of effect of Household water access

	Rate service Model 1	Own living Model 2	Rate local gov Model 3	Rate prez Model 4	Vote ANC Model 5
ownwater	0.001 (0.064)	-0.026 (0.033)	0.091 (0.064)	-0.035 (0.040)	-0.297*** (0.052)
wave906	-0.003 (0.040)	-0.031 (0.030)	-0.018 (0.058)	-0.099 (0.077)	0.277*** (0.082)
urban	-0.047 (0.049)	-0.047 (0.100)	-0.077 (0.063)	0.009 (0.072)	-0.081 (0.152)
female	-0.034 (0.026)	-0.009 (0.029)	-0.012 (0.041)	-0.0003 (0.031)	0.007 (0.071)
cashjob	0.030 (0.034)	0.058 (0.055)	0.074** (0.035)	0.135*** (0.029)	0.018 (0.065)
educ	0.075 (0.112)	0.277*** (0.083)	0.183 (0.125)	-0.020 (0.136)	-0.052 (0.195)
age	0.002 (0.002)	0.0002 (0.001)	0.0002 (0.002)	0.001 (0.001)	0.002 (0.002)
home_zulu	-0.150 (0.091)	-0.088 (0.116)	0.130 (0.135)	-0.017 (0.062)	0.295 (0.189)
home_xhosa	-0.097*** (0.033)	-0.136* (0.071)	0.004 (0.083)	0.058 (0.054)	0.007 (0.154)
Constant	0.575*** (0.115)	0.386*** (0.095)	0.359** (0.155)	0.425*** (0.087)	0.627** (0.308)
N	316	320	289	309	321
R-squared	0.239	0.291	0.198	0.199	0.250

\*\*\* p < .01; \*\* p < .05; \* p < .1

Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 41: OLS estimates of effect of Enumeration Area water access

	Rate service Model 1	Own living Model 2	Rate local gov Model 3	Rate prez Model 4	Vote ANC Model 5
ea_water	0.157*** (0.042)	0.056** (0.028)	0.068** (0.033)	0.047** (0.019)	-0.064 (0.050)
wave904	-0.144*** (0.030)	0.062* (0.032)	-0.045 (0.035)	-0.063** (0.026)	-0.087** (0.035)
wave905	-0.192*** (0.068)	0.008 (0.068)	-0.006 (0.029)	-0.137** (0.056)	-0.147 (0.149)
wave906	-0.190*** (0.061)	-0.034 (0.074)	-0.014 (0.061)	-0.247*** (0.095)	0.052 (0.056)
urban	0.080 (0.054)	0.033 (0.029)	0.010 (0.023)	-0.011 (0.022)	-0.053 (0.038)
female	-0.032** (0.013)	-0.004 (0.025)	0.021 (0.024)	0.009 (0.017)	-0.044 (0.035)
cashjob	0.040** (0.019)	0.055* (0.029)	0.045 (0.029)	0.028 (0.023)	-0.016 (0.032)
educ	0.109 (0.095)	0.293*** (0.044)	0.149** (0.074)	0.151 (0.105)	0.127 (0.121)
age	-0.0003 (0.001)	-0.001 (0.001)	0.0004 (0.001)	-0.0003 (0.001)	-0.002* (0.001)
home_zulu	-0.033 (0.037)	-0.002 (0.059)	0.005 (0.049)	-0.049 (0.036)	0.109 (0.097)
home_xhosa	-0.056** (0.026)	-0.090 (0.076)	-0.049 (0.060)	0.089* (0.050)	0.227** (0.098)
Constant	0.566*** (0.090)	0.282*** (0.103)	0.325*** (0.108)	0.553*** (0.080)	0.662*** (0.157)
N	1070	1079	962	1036	1081
R-squared	0.272	0.163	0.131	0.223	0.172

\*\*\* p < .01; \*\* p < .05; \* p < .1

Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 42: OLS estimates of effect of Municipal Water Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
home_water_nonwhite	-0.019 (0.080)	-0.227*** (0.051)	-0.085 (0.076)	-0.072 (0.097)	-0.087 (0.080)
wave906	-0.042* (0.023)	-0.005 (0.022)	-0.125*** (0.020)	-0.257*** (0.028)	-0.120*** (0.033)
urban	0.116*** (0.022)	0.069*** (0.020)	0.015 (0.021)	0.019 (0.025)	0.002 (0.023)
female	0.019* (0.010)	0.005 (0.007)	-0.005 (0.012)	0.001 (0.012)	-0.002 (0.014)
cashjob	0.058*** (0.018)	0.065*** (0.020)	0.020 (0.019)	0.047*** (0.017)	-0.039 (0.029)
educ	0.094 (0.064)	0.119* (0.062)	0.111* (0.064)	0.062 (0.080)	-0.171** (0.078)
age	-0.0005 (0.0004)	-0.001*** (0.0004)	0.001 (0.0004)	0.0003 (0.0005)	0.001 (0.001)
home_zulu	-0.003 (0.027)	-0.054** (0.022)	0.040* (0.023)	0.019 (0.027)	-0.144*** (0.023)
home_xhosa	-0.057*** (0.019)	-0.091*** (0.017)	-0.035** (0.018)	0.025 (0.020)	-0.035 (0.026)
Constant	0.475*** (0.042)	0.537*** (0.041)	0.504*** (0.049)	0.643*** (0.052)	0.957*** (0.060)
N	2651	2665	2435	2530	2676
R-squared	0.050	0.050	0.063	0.170	0.050

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 43: OLS estimates of effect of Ward Water Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
w_home_water_ward_nonwhite	0.068* (0.036)	0.006 (0.032)	-0.018 (0.033)	-0.042 (0.034)	-0.066 (0.044)
wave906	-0.055*** (0.018)	-0.034** (0.016)	-0.129*** (0.017)	-0.256*** (0.017)	-0.114*** (0.022)
districtcode	0.0001 (0.001)	-0.0004 (0.001)	0.001* (0.001)	0.002*** (0.001)	0.001 (0.001)
w_log_pop_ward	-0.014 (0.015)	-0.024* (0.013)	-0.016 (0.014)	-0.007 (0.014)	-0.048*** (0.017)
urban	0.100*** (0.019)	0.035** (0.016)	-0.002 (0.017)	0.003 (0.017)	0.008 (0.020)
female	0.018 (0.011)	0.005 (0.011)	-0.006 (0.012)	0.001 (0.011)	-0.002 (0.014)
cashjob	0.055*** (0.017)	0.060*** (0.016)	0.018 (0.018)	0.045** (0.018)	-0.038 (0.023)
educ	0.091 (0.058)	0.132** (0.053)	0.115** (0.058)	0.065 (0.055)	-0.151** (0.068)
age	-0.001 (0.0005)	-0.001*** (0.0004)	0.0005 (0.0004)	0.0003 (0.0004)	0.001* (0.0005)
home_zulu	-0.005 (0.020)	-0.064*** (0.018)	0.040** (0.018)	0.021 (0.018)	-0.133*** (0.025)
home_xhosa	-0.057*** (0.020)	-0.096*** (0.017)	-0.028 (0.017)	0.038** (0.017)	-0.031 (0.023)
Constant	0.600*** (0.131)	0.745*** (0.117)	0.612*** (0.128)	0.659*** (0.125)	1.353*** (0.150)
N	2651	2665	2435	2530	2676
R-squared	0.052	0.044	0.064	0.173	0.054

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 44: OLS estimates of effect of Municipal Refuse Collection Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
refuse_nonwhite	0.137** (0.056)	-0.116*** (0.025)	-0.024 (0.034)	-0.039 (0.046)	-0.026 (0.045)
urban	0.087*** (0.032)	0.072*** (0.020)	0.006 (0.021)	0.017 (0.026)	-0.007 (0.023)
female	0.006 (0.015)	0.005 (0.007)	-0.009 (0.013)	-0.006 (0.012)	-0.005 (0.014)
cashjob	0.056** (0.027)	0.060*** (0.021)	-0.006 (0.019)	0.001 (0.018)	-0.062** (0.029)
educ	0.292*** (0.076)	0.168** (0.074)	0.347*** (0.052)	0.528*** (0.072)	0.051 (0.062)
age	0.0002 (0.001)	-0.001*** (0.0004)	0.001*** (0.0004)	0.002*** (0.0004)	0.001** (0.001)
home_zulu	0.012 (0.034)	-0.062** (0.025)	0.023 (0.019)	-0.007 (0.020)	-0.159*** (0.028)
home_xhosa	-0.102*** (0.039)	-0.090*** (0.017)	-0.036* (0.018)	0.025 (0.024)	-0.034 (0.026)
Constant	0.224*** (0.051)	0.501*** (0.041)	0.302*** (0.038)	0.253*** (0.044)	0.763*** (0.044)
N	1316	2665	2435	2530	2676
R-squared	0.113	0.047	0.028	0.052	0.031

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 45: OLS estimates of effect of Ward Refuse Collection Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
w_refuse_ward_nonwhite	0.136*** (0.037)	0.016 (0.024)	-0.017 (0.028)	-0.074** (0.029)	-0.036 (0.032)
districtcode	0.003*** (0.001)	-0.0004 (0.001)	0.002*** (0.001)	0.003*** (0.001)	0.001* (0.001)
w_log_pop_ward	-0.004 (0.019)	-0.027** (0.013)	-0.027* (0.014)	-0.028* (0.015)	-0.060*** (0.017)
urban	0.048* (0.028)	0.028 (0.019)	0.0001 (0.023)	0.029 (0.024)	0.011 (0.026)
female	0.006 (0.016)	0.004 (0.011)	-0.009 (0.012)	-0.006 (0.011)	-0.005 (0.014)
cashjob	0.049** (0.024)	0.054*** (0.016)	-0.007 (0.018)	0.002 (0.020)	-0.060*** (0.023)
educ	0.265*** (0.068)	0.189*** (0.048)	0.340*** (0.053)	0.518*** (0.053)	0.054 (0.058)
age	-0.0001 (0.001)	-0.001*** (0.0004)	0.001** (0.0004)	0.001*** (0.0004)	0.001*** (0.001)
home_zulu	0.014 (0.024)	-0.066*** (0.018)	0.030* (0.018)	0.004 (0.018)	-0.144*** (0.025)
home_xhosa	-0.076*** (0.027)	-0.096*** (0.017)	-0.025 (0.019)	0.044** (0.022)	-0.028 (0.024)
Constant	0.221 (0.171)	0.721*** (0.115)	0.504*** (0.128)	0.445*** (0.138)	1.275*** (0.156)
N	1316	2665	2435	2530	2676
R-squared	0.132	0.042	0.032	0.063	0.037

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 46: OLS estimates of effect of Household toilet access

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
owntoilet	0.091 (0.071)	0.104 (0.077)	0.184*** (0.037)	0.184*** (0.037)	-0.464*** (0.151)
urban	-0.006 (0.118)	0.290** (0.133)	-0.110 (0.116)	-0.110 (0.116)	0.232 (0.245)
female	-0.064* (0.034)	-0.074 (0.048)	0.017 (0.047)	0.017 (0.047)	0.016 (0.107)
cashjob	0.001 (0.065)	0.023 (0.129)	0.001 (0.039)	0.001 (0.039)	-0.036 (0.087)
educ	0.085 (0.176)	0.450*** (0.172)	-0.345*** (0.124)	-0.345*** (0.124)	-0.283 (0.332)
age	0.002 (0.002)	0.005*** (0.002)	0.001 (0.001)	0.001 (0.001)	0.001 (0.004)
home_zulu	0.135* (0.074)	0.340*** (0.036)	-0.171 (0.125)	-0.171 (0.125)	0.576** (0.283)
home_xhosa	-0.024 (0.082)	-0.148*** (0.027)	-0.090 (0.120)	-0.090 (0.120)	0.169 (0.249)
Constant	0.422** (0.182)	-0.279 (0.270)	0.576*** (0.123)	0.576*** (0.123)	0.769** (0.336)
N	136	136	131	131	136
R-squared	0.179	0.303	0.369	0.369	0.284

\*\*\*p < .01; \*\*p < .05; \*p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 47: OLS estimates of effect of Enumeration Area sewer line access

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_sewer	0.096*** (0.027)	0.089*** (0.029)	0.074** (0.037)	0.058*** (0.020)	-0.051 (0.037)
wave904	-0.151*** (0.031)	0.052 (0.035)	-0.054 (0.040)	-0.070*** (0.026)	-0.082** (0.033)
wave905	-0.204*** (0.067)	0.00001 (0.063)	-0.013 (0.031)	-0.142*** (0.053)	-0.141 (0.153)
wave906	-0.195*** (0.064)	-0.037 (0.070)	-0.018 (0.061)	-0.250*** (0.093)	0.054 (0.056)
urban	0.080* (0.042)	0.003 (0.034)	-0.008 (0.032)	-0.026 (0.026)	-0.046 (0.040)
female	-0.032*** (0.013)	-0.003 (0.025)	0.022 (0.024)	0.009 (0.017)	-0.045 (0.035)
cashjob	0.040** (0.020)	0.057* (0.030)	0.047* (0.028)	0.029 (0.023)	-0.016 (0.032)
educ	0.097 (0.092)	0.277*** (0.046)	0.135* (0.070)	0.139 (0.100)	0.135 (0.123)
age	-0.0003 (0.001)	-0.001 (0.001)	0.0003 (0.001)	-0.0003 (0.001)	-0.002* (0.001)
home_zulu	-0.041 (0.037)	0.015 (0.059)	0.014 (0.049)	-0.041 (0.034)	0.106 (0.094)
home_xhosa	-0.067*** (0.023)	-0.079 (0.080)	-0.044 (0.057)	0.094** (0.047)	0.228** (0.099)
Constant	0.651*** (0.096)	0.287*** (0.106)	0.349*** (0.097)	0.565*** (0.089)	0.634*** (0.151)
N	1070	1079	962	1036	1081
R-squared	0.257	0.169	0.132	0.225	0.171

\*\*\*p < .01; \*\*p < .05; \*p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 48: OLS estimates of effect of Municipal Toilet Service Coverage (Percent Households)

	Own Living	Own Living	Liv Comp Othrs	Liv Comp Othrs	ANC Vote
	Model 1	Model 2	Model 3	Model 4	Model 5
all_flush_nonwhite	0.039 (0.041)	-0.155*** (0.030)	-0.058 (0.039)	-0.070 (0.050)	-0.048 (0.048)
wave906	-0.046* (0.024)	-0.031 (0.023)	-0.134*** (0.021)	-0.265*** (0.027)	-0.130*** (0.030)
urban	0.098*** (0.023)	0.083*** (0.020)	0.020 (0.021)	0.032 (0.024)	0.003 (0.024)
female	0.018* (0.010)	0.006 (0.007)	-0.005 (0.012)	0.001 (0.012)	-0.002 (0.015)
cashjob	0.056*** (0.018)	0.068*** (0.020)	0.021 (0.019)	0.049*** (0.017)	-0.039 (0.029)
educ	0.101 (0.066)	0.102* (0.061)	0.106* (0.064)	0.055 (0.081)	-0.176** (0.077)
age	-0.0005 (0.0004)	-0.001*** (0.0004)	0.0005 (0.0004)	0.0003 (0.0005)	0.001 (0.001)
home_zulu	-0.007 (0.027)	-0.055** (0.024)	0.039* (0.023)	0.020 (0.027)	-0.146*** (0.024)
home_xhosa	-0.057*** (0.020)	-0.090*** (0.017)	-0.035** (0.018)	0.025 (0.020)	-0.035 (0.025)
Constant	0.461*** (0.044)	0.565*** (0.041)	0.513*** (0.050)	0.657*** (0.053)	0.965*** (0.059)
N	2651	2665	2435	2530	2676
R-squared	0.051	0.053	0.064	0.172	0.049

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

Table 49: OLS estimates of effect of Ward Toilet Service Coverage (Percent Households)

	Rate service	Own living	Rate local gov	Rate prez	Vote ANC
	Model 1	Model 2	Model 3	Model 4	Model 5
w_all_flush_ward_nonwhite	0.101*** (0.028)	0.009 (0.024)	-0.039 (0.026)	-0.086*** (0.026)	-0.070** (0.031)
wave906	-0.049*** (0.016)	-0.034** (0.015)	-0.130*** (0.016)	-0.259*** (0.016)	-0.122*** (0.022)
districtcode	-0.0001 (0.001)	-0.0005 (0.001)	0.001** (0.001)	0.002*** (0.001)	0.001 (0.001)
w_log_pop_ward	-0.011 (0.015)	-0.024* (0.013)	-0.017 (0.014)	-0.009 (0.013)	-0.051*** (0.017)
urban	0.066*** (0.022)	0.032* (0.019)	0.013 (0.021)	0.036* (0.020)	0.027 (0.023)
female	0.018 (0.011)	0.005 (0.011)	-0.005 (0.012)	0.002 (0.011)	-0.002 (0.014)
cashjob	0.051*** (0.016)	0.059*** (0.016)	0.019 (0.018)	0.049*** (0.018)	-0.036 (0.023)
educ	0.100* (0.057)	0.132** (0.053)	0.113* (0.058)	0.060 (0.055)	-0.159** (0.069)
age	-0.001 (0.0005)	-0.001*** (0.0004)	0.0005 (0.0004)	0.0003 (0.0004)	0.001* (0.0005)
home_zulu	-0.010 (0.020)	-0.065*** (0.018)	0.042** (0.018)	0.025 (0.018)	-0.132*** (0.025)
home_xhosa	-0.058*** (0.019)	-0.096*** (0.017)	-0.027 (0.017)	0.039** (0.017)	-0.030 (0.023)
Constant	0.562*** (0.129)	0.741*** (0.116)	0.623*** (0.129)	0.685*** (0.124)	1.389*** (0.148)
N	2651	2665	2435	2530	2676
R-squared	0.057	0.044	0.065	0.178	0.055

\*\*\* p < .01; \*\* p < .05; \* p < .1  
 Clustered (muni) standard errors in parentheses. Non-ANC areas

### 8.3. CORRUPTION ANALYSES

The following table is the table presented in the main text for corruption, but with the covariates presented too.

Table 50: Service Provision and Perceptions of Corruption (AB Round 5 data, black respondents in ANC-controlled municipalities)

	<b>ANC Vote</b>	<b>Perceive Corruption</b>	<b>Perceive Corruption</b>
	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
corrupt	-0.150** (0.061)		
ownwater		0.056*** (0.016)	
owntoilet			0.111*** (0.036)
urban	-0.012 (0.035)	0.003 (0.015)	0.001 (0.014)
female	-0.010 (0.022)	-0.019* (0.011)	-0.016 (0.011)
cashjob	-0.0002 (0.030)	-0.016 (0.027)	-0.013 (0.027)
educ	-0.254*** (0.091)	-0.040 (0.056)	-0.055 (0.056)
age	0.002* (0.001)	-0.0004 (0.0005)	-0.0004 (0.0005)
Constant	0.857*** (0.076)	0.552*** (0.039)	0.514*** (0.042)
N	1279	1279	1277
R-squared	0.021	0.011	0.023

\*\*\*p < .01; \*\*p < .05; \*p < .1

Clustered (municipality) standard errors in parentheses.



## 8.4. RELATIVE DEPRIVATION ANALYSES

To test for relative deprivation, we consider whether higher levels of municipal-level service coverage are associated with lower self-ratings of individual living conditions and of living conditions compared to others. We find that voting patterns trend in the opposite direction: Amongst those *without* household services, better ward-level water coverage and toilet coverage is associated with a higher likelihood (not significant) of voting for the incumbent ANC. This suggests that our results are likely not driven by relative deprivation.

Table 51: The effects of municipal-level service delivery coverage among those without household services

	Own Living Model 1	Own Living Model 2	Liv Comp Othrs Model 3	Liv Comp Othrs Model 4	ANC Vote Model 5	ANC Vote Model 6
home_water	-0.148 (0.163)		-0.086 (0.155)		0.213 (0.215)	
all_flush		-0.307** (0.126)		-0.241* (0.124)		0.139 (0.137)
whitefrac	0.475 (0.719)	1.375** (0.681)	0.290 (0.536)	0.976* (0.502)	-0.671 (0.700)	-0.598 (0.542)
urban	0.016 (0.053)	0.037 (0.059)	-0.027 (0.047)	-0.013 (0.044)	0.020 (0.068)	0.054 (0.055)
female	0.005 (0.025)	0.032 (0.031)	0.024 (0.022)	0.043 (0.027)	0.028 (0.033)	0.035 (0.041)
cashjob	0.075 (0.049)	0.117** (0.051)	0.069* (0.038)	0.107*** (0.040)	-0.039 (0.067)	-0.002 (0.052)
educ	0.239** (0.117)	0.193 (0.138)	0.244*** (0.090)	0.326*** (0.110)	-0.029 (0.163)	-0.040 (0.195)
age	-0.0005 (0.001)	0.0004 (0.001)	-0.001 (0.001)	0.0003 (0.001)	0.001 (0.002)	0.003* (0.002)
Constant	0.372*** (0.085)	0.383*** (0.109)	0.428*** (0.063)	0.395*** (0.085)	0.669*** (0.115)	0.569*** (0.141)
N	464	372	454	362	466	372
R-squared	0.030	0.067	0.049	0.109	0.010	0.023

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Clustered (municipality) standard errors in parentheses.

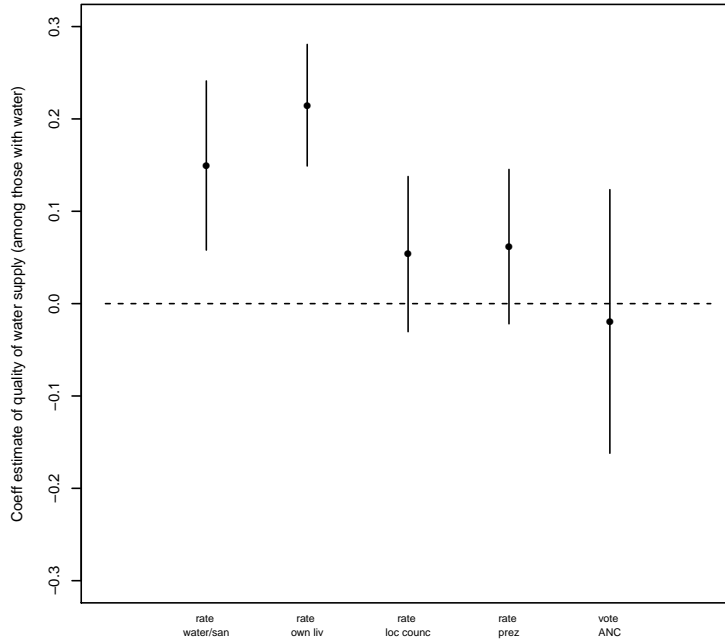
## 8.5. DISAPPOINTMENT ANALYSES

Another plausible correction to the core model would be an accounting of quality and satisfaction. The South African news media frequently reports on problems of service delivery beyond the provision of basic infrastructure, focusing on quality and flows. Citizens who receive services may find that the services are actually of poorer quality than anticipated. This may lead to disappointment and resentment – a resentment that is more intense than that expressed by those voters who did not receive any services.

If disappointment explains our results, we should expect that, at the individual level, among those who receive services, those with the best quality services would be more likely to vote for the incumbent, and *vice versa*. In fact, the evidence available to us contradicts this prediction. We considered the subset of citizens who had indicated that their household had direct access to water service, and we analyzed their responses to the question of, “Over the past year, how often, if ever, have you or anyone in your family gone without enough clean water for home use?” We interpreted the responses to this question, for those who do have access to water facilities, as a good indicator of *quality* of water services. Although the vast majority (81 percent) reported no shortages, the remaining 19 percent reported various levels of shortages.

As we show in figure 6, those with more consistent water supply *do* rate the quality of government provision of water services and their own living conditions as being higher than those with shortages. Moreover, they provide higher ratings of their local councils and the president (though not with statistically significant provision). Yet we find essentially no impact of quality on the likelihood of supporting the ANC – the point estimate is even slightly negative, though not statistically distinguishable from zero.

Figure 6: Household Water Service Quality and Citizen Attitudes and Intentions



Note: Each panel presents coefficient estimates of consistency of water supply from OLS regressions, calculated with survey wave and municipality fixed effects. Sample restricted to Black respondents in ANC-controlled municipalities indicating a water tap inside the household or compound. Afrobarometer survey items listed on the X-axes are the outcome variables from separate regressions. Lines represent 95 percent confidence intervals. All standard errors are calculated by clustering data at the municipality-level. Individual-level controls include gender, age, education-level, dummy variables for home language (Xhosa or Zulu, with other as missing category), and a dummy variable for urban residence; and at the municipal-level, we control for log of population. Note that data about own water were only contained in rounds 4 and 5; and data about own toilets were only contained in wave 5.

## 9. INDIVIDUAL-LEVEL POST-MATCHING BALANCE TABLES

To ensure that our individual level results were not simply driven by specification choice, we re-estimated our results using matching as pre-processing. The results of the matching exercises for the balance of covariates are presented below.

Table 52: Covariate Balance in Unmatched Data (Water)

	mean.Tr	mean.Co	sdiff	sdiff.pooled	var.ratio	T pval
log_pop	13.17	12.64	36.88	54.56	1.53	0.00
age	36.02	36.54	-3.70	-5.06	0.83	0.40
educ_r	1.33	1.04	40.55	55.44	0.91	0.00
cashjob	0.36	0.23	28.10	41.20	1.35	0.00
urban	0.70	0.28	90.05	117.88	1.04	0.00
female	0.51	0.50	1.91	2.70	1.00	0.65
home_afrik	0.01	0.00	8.65	14.11	3.85	0.00
home_xhosa	0.14	0.30	-45.45	-56.68	0.58	0.00
home_zulu	0.26	0.17	21.68	32.03	1.39	0.00

Table 53: Covariate Balance in Exactly Matched Data (Water)

	mean.Tr	mean.Co	sdiff	sdiff.pooled	var.ratio	T pval	KS pval
log_pop	13.72	13.72	0.00	0.00	1.00	1.00	1.00
age	35.41	34.34	7.35	7.35	1.14	0.17	0.00
educ_r	1.26	1.26	0.00	0.00	1.00	1.00	1.00
cashjob	0.21	0.21	0.00	0.00	1.00	1.00	1.00
urban	0.68	0.68	0.00	0.00	1.00	1.00	
female	0.50	0.54	-8.72	-8.72	1.01	0.17	
home_afrik	0.00	0.00	0.00	0.00	1.00	1.00	
home_xhosa	0.15	0.16	-2.99	-2.99	0.94	0.31	
home_zulu	0.32	0.32	0.00	0.00	1.00	1.00	

Table 54: Covariate Balance in Unmatched Data (Toilets)

	mean.Tr	mean.Co	sdiff	sdiff.pooled	var.ratio	T pval
log_pop	12.99	13.10	-7.89	-11.07	0.87	0.42
age	35.81	37.43	-10.94	-15.39	0.91	0.25
educ	1.24	1.03	29.53	41.47	0.93	0.00
cashjob	0.26	0.26	-0.59	-0.83	0.96	0.95
urban	0.57	0.37	41.99	59.07	1.05	0.00
female	0.50	0.54	-6.72	-9.51	1.00	0.46
home_afrik	0.01	0.01	1.65	2.35	1.20	0.84
home_xhosa	0.20	0.13	18.13	26.01	1.43	0.02
home_zulu	0.23	0.28	-10.20	-14.34	0.89	0.29

Table 55: Covariate Balance in Exactly Matched Data (Toilets)

	mean.Tr	mean.Co	sdiff	sdiff.pooled	var.ratio	T pval	KS pval
log_pop	13.85	13.85	0.00	0.00	1.00	1.00	1.00
age	36.10	34.20	11.92	11.92	1.19	0.21	0.00
educ_r	1.09	1.09	0.00	0.00	1.00	1.00	1.00
cashjob	0.14	0.14	0.00	0.00	1.00	1.00	1.00
urban	0.62	0.62	0.00	0.00	1.00	1.00	
female	0.50	0.49	2.41	2.41	1.00	0.83	
home_afrik	0.02	0.00	13.17	13.17	Inf	0.08	
home_xhosa	0.21	0.21	-1.97	-1.97	0.97	0.69	
home_zulu	0.26	0.26	0.00	0.00	1.00	1.00	

## 10. BOTSWANA, NAMIBIA, AND LESOTHO INDIVIDUAL-LEVEL ANALYSES

The following ten tables present the full regression output of the individual-level analyses of Botswana, Namibia, and Lesotho respectively. These tables underpin the results presented in the paper.

Table 56: Botswana: Estimates of Household-level access to water

	rate water/san	rate own living	rate local council	rate president	vote bdp
	Model 1	Model 2	Model 3	Model 4	Model 5
ownwater	0.100*** (0.018)	0.130*** (0.017)	0.014 (0.021)	-0.028 (0.019)	-0.082** (0.033)
round5	-0.011 (0.012)	-0.046*** (0.011)	0.015 (0.014)	-0.109*** (0.013)	-0.149*** (0.022)
urban	0.069*** (0.013)	0.020 (0.012)	0.018 (0.015)	0.006 (0.014)	0.030 (0.023)
female	-0.009 (0.011)	-0.017* (0.010)	-0.002 (0.013)	0.006 (0.011)	0.044** (0.019)
cashjob	0.011 (0.014)	0.026** (0.013)	-0.002 (0.016)	-0.054*** (0.015)	-0.097*** (0.025)
educ	-0.021 (0.031)	0.192*** (0.030)	-0.066* (0.037)	-0.086*** (0.033)	-0.119** (0.057)
age	-0.0002 (0.0004)	-0.002*** (0.0004)	0.00003 (0.0005)	0.001* (0.0004)	0.002*** (0.001)
home_setswana	0.024* (0.012)	0.001 (0.012)	-0.028* (0.015)	-0.021 (0.013)	-0.025 (0.023)
Constant	0.509*** (0.027)	0.314*** (0.026)	0.507*** (0.032)	0.846*** (0.029)	0.677*** (0.050)
N	2365	2388	2271	2300	2393
R-squared	0.050	0.151	0.004	0.073	0.072

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 57: Botswana: Estimates of Enumeration area access to water

	rate water/san	rate own living	rate local council	rate president	vote bdp
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_water	0.044*** (0.012)	0.014 (0.012)	0.027* (0.014)	0.003 (0.014)	-0.042 (0.028)
round3	0.019* (0.011)	-0.041*** (0.011)	0.044*** (0.013)	0.016 (0.012)	
round4	-0.010 (0.011)	-0.010 (0.011)	-0.043*** (0.013)	0.221*** (0.012)	0.158*** (0.020)
round5	-0.024** (0.011)	-0.042*** (0.011)	-0.033** (0.013)	0.106*** (0.012)	-0.007 (0.020)
urban	0.049*** (0.008)	0.041*** (0.008)	0.006 (0.010)	0.006 (0.009)	0.002 (0.018)
female	0.001 (0.008)	-0.008 (0.008)	0.004 (0.009)	0.015* (0.008)	0.050*** (0.016)
cashjob	0.012 (0.010)	0.040*** (0.010)	-0.008 (0.011)	-0.039*** (0.011)	-0.086*** (0.021)
educ	0.084*** (0.021)	0.275*** (0.021)	-0.003 (0.025)	-0.018 (0.024)	-0.155*** (0.046)
age	0.001* (0.0003)	-0.001*** (0.0003)	0.001* (0.0003)	0.001** (0.0003)	0.002*** (0.001)
home_setswana	0.031*** (0.009)	-0.009 (0.009)	-0.028*** (0.011)	-0.027*** (0.010)	-0.042** (0.020)
Constant	0.453*** (0.022)	0.281*** (0.021)	0.490*** (0.025)	0.579*** (0.024)	0.576*** (0.047)
N	4698	4746	4466	4517	3575
R-squared	0.029	0.110	0.016	0.101	0.059

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data



Table 58: Botswana: Estimates of Household-level access to flush toilet

	rate water/san	rate own living	rate local council	rate president	vote bdp
	Model 1	Model 2	Model 3	Model 4	Model 5
owntoilet	0.075** (0.031)	0.185*** (0.027)	0.036 (0.037)	-0.040 (0.035)	-0.127** (0.057)
urban	0.046** (0.020)	0.051*** (0.018)	0.032 (0.025)	-0.006 (0.023)	0.034 (0.038)
female	0.006 (0.015)	-0.031** (0.014)	0.0005 (0.018)	-0.010 (0.017)	0.043 (0.028)
cashjob	0.024 (0.020)	0.038** (0.018)	-0.006 (0.024)	-0.065*** (0.022)	-0.131*** (0.036)
educ	-0.029 (0.044)	0.128*** (0.039)	-0.095* (0.052)	-0.080 (0.050)	-0.194** (0.081)
age	-0.001 (0.001)	-0.003*** (0.001)	0.0003 (0.001)	0.001 (0.001)	0.002** (0.001)
home_setswana	0.050*** (0.018)	0.001 (0.016)	-0.035 (0.022)	-0.030 (0.021)	-0.030 (0.034)
Constant	0.496*** (0.040)	0.273*** (0.035)	0.508*** (0.048)	0.764*** (0.045)	0.615*** (0.073)
N	1175	1190	1114	1146	1194
R-squared	0.027	0.194	0.010	0.032	0.061

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 59: Botswana: Estimates of Enumeration area sewer line

	rate water/san	rate own living	rate local council	rate president	vote bdp
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_sewer	0.046*** (0.009)	0.038*** (0.009)	0.015 (0.011)	-0.013 (0.010)	0.022 (0.020)
round3	0.026** (0.011)	-0.036*** (0.011)	0.047*** (0.013)	0.015 (0.012)	
round4	-0.005 (0.011)	-0.008 (0.011)	-0.040*** (0.013)	0.221*** (0.012)	0.154*** (0.020)
round5	-0.024** (0.011)	-0.043*** (0.011)	-0.033** (0.013)	0.107*** (0.012)	-0.012 (0.021)
urban	0.036*** (0.009)	0.028*** (0.009)	0.003 (0.011)	0.011 (0.010)	-0.010 (0.020)
female	0.0001 (0.008)	-0.009 (0.008)	0.004 (0.009)	0.015* (0.008)	0.050*** (0.016)
cashjob	0.009 (0.010)	0.037*** (0.010)	-0.009 (0.011)	-0.038*** (0.011)	-0.087*** (0.021)
educ	0.077*** (0.021)	0.265*** (0.021)	-0.003 (0.025)	-0.013 (0.024)	-0.171*** (0.046)
age	0.001* (0.0003)	-0.001*** (0.0003)	0.001* (0.0003)	0.001** (0.0003)	0.002*** (0.001)
home_setswana	0.025*** (0.009)	-0.013 (0.009)	-0.031*** (0.011)	-0.026*** (0.010)	-0.041** (0.020)
Constant	0.490*** (0.020)	0.294*** (0.019)	0.512*** (0.023)	0.580*** (0.022)	0.547*** (0.042)
N	4698	4746	4466	4517	3575
R-squared	0.031	0.113	0.015	0.102	0.058

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 60: Namibia: Estimates of Household-level access to water

	rate water/san	rate own living	rate local council	rate president	vote swapo
	Model 1	Model 2	Model 3	Model 4	Model 5
ownwater	0.143*** (0.018)	0.143*** (0.018)	0.010 (0.017)	0.026* (0.015)	-0.033 (0.028)
round5	-0.086*** (0.013)	0.029** (0.012)	-0.048*** (0.012)	-0.063*** (0.010)	0.100*** (0.019)
urban	0.045*** (0.016)	-0.021 (0.015)	0.016 (0.015)	-0.047*** (0.013)	-0.006 (0.024)
female	-0.008 (0.013)	-0.002 (0.012)	-0.006 (0.012)	-0.008 (0.010)	-0.006 (0.019)
cashjob	0.015 (0.016)	0.026* (0.015)	0.036** (0.015)	0.016 (0.013)	-0.015 (0.024)
educ	0.048 (0.041)	0.246*** (0.039)	-0.024 (0.039)	0.006 (0.033)	-0.176*** (0.062)
age	0.001*** (0.0005)	-0.0001 (0.0004)	-0.0001 (0.0005)	0.001* (0.0004)	0.002** (0.001)
home_ovambo	0.062*** (0.013)	0.054*** (0.013)	0.034*** (0.012)	0.045*** (0.011)	0.289*** (0.020)
Constant	0.368*** (0.030)	0.298*** (0.029)	0.568*** (0.029)	0.743*** (0.025)	0.395*** (0.046)
N	2367	2384	2138	2326	2392
R-squared	0.080	0.088	0.015	0.036	0.117

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 61: Namibia: Estimates of Enumeration area access to water

	rate water/san	rate own living	rate local council	rate president	vote swapo
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_water	0.035*** (0.010)	-0.010 (0.010)	-0.016 (0.011)	-0.004 (0.008)	-0.049*** (0.019)
round3	0.044*** (0.012)	-0.011 (0.012)	0.070*** (0.017)	0.050*** (0.010)	
round4	-0.007 (0.013)	-0.076*** (0.013)	0.063*** (0.018)	0.019* (0.010)	-0.169*** (0.019)
round5	-0.083*** (0.012)	-0.048*** (0.012)	0.012 (0.017)	-0.044*** (0.010)	-0.082*** (0.019)
urban	0.086*** (0.010)	0.023** (0.010)	-0.001 (0.011)	-0.044*** (0.008)	0.014 (0.018)
female	-0.012 (0.009)	0.003 (0.008)	-0.008 (0.009)	-0.003 (0.007)	-0.00002 (0.015)
cashjob	0.029*** (0.011)	0.047*** (0.010)	0.019* (0.011)	0.009 (0.008)	-0.017 (0.019)
educ	0.111*** (0.027)	0.311*** (0.026)	-0.009 (0.028)	-0.008 (0.021)	-0.085* (0.047)
age	0.001*** (0.0003)	0.0002 (0.0003)	0.00003 (0.0004)	0.0004 (0.0003)	0.002*** (0.001)
home_ovambo	0.050*** (0.009)	0.034*** (0.009)	0.037*** (0.009)	0.065*** (0.007)	0.308*** (0.016)
Constant	0.359*** (0.022)	0.380*** (0.021)	0.522*** (0.027)	0.742*** (0.017)	0.531*** (0.038)
N	4718	4757	3625	4639	3581
R-squared	0.063	0.067	0.017	0.053	0.134

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 62: Namibia: Estimates of Household-level access to flush toilet

	rate water/san	rate own living	rate local council	rate president	vote swapo
	Model 1	Model 2	Model 3	Model 4	Model 5
owntoilet	0.137*** (0.030)	0.167*** (0.030)	-0.011 (0.028)	0.059** (0.025)	-0.011 (0.047)
urban	0.028 (0.023)	-0.035 (0.023)	0.030 (0.022)	-0.058*** (0.019)	-0.048 (0.036)
female	-0.003 (0.018)	-0.010 (0.018)	-0.005 (0.017)	-0.004 (0.015)	-0.013 (0.028)
cashjob	0.015 (0.022)	0.007 (0.022)	0.005 (0.021)	0.017 (0.018)	-0.014 (0.034)
educ	0.033 (0.056)	0.219*** (0.056)	-0.036 (0.053)	-0.077 (0.047)	-0.131 (0.088)
age	0.001** (0.001)	0.001 (0.001)	-0.001 (0.001)	0.001* (0.001)	0.001 (0.001)
home_ovambo	0.045** (0.018)	0.029 (0.018)	0.001 (0.017)	0.059*** (0.015)	0.249*** (0.028)
Constant	0.290*** (0.040)	0.317*** (0.040)	0.567*** (0.039)	0.686*** (0.034)	0.530*** (0.063)
N	1179	1180	1075	1153	1188
R-squared	0.051	0.071	0.003	0.032	0.086

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 63: Namibia: Estimates of Enumeration area sewer line

	rate water/san	rate own living	rate local council	rate president	vote swapo
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_sewer	0.072*** (0.014)	0.053*** (0.013)	0.014 (0.014)	0.006 (0.011)	-0.014 (0.025)
round3	0.043*** (0.012)	-0.018 (0.012)	0.066*** (0.017)	0.049*** (0.010)	
round4	0.001 (0.012)	-0.085*** (0.012)	0.056*** (0.017)	0.017* (0.010)	-0.180*** (0.019)
round5	-0.081*** (0.012)	-0.051*** (0.012)	0.009 (0.017)	-0.045*** (0.010)	-0.081*** (0.019)
urban	0.047*** (0.013)	-0.018 (0.013)	-0.016 (0.014)	-0.050*** (0.011)	0.009 (0.024)
female	-0.012 (0.009)	0.002 (0.008)	-0.008 (0.009)	-0.003 (0.007)	-0.0003 (0.015)
cashjob	0.029*** (0.011)	0.044*** (0.010)	0.016 (0.011)	0.008 (0.008)	-0.021 (0.019)
educ	0.101*** (0.027)	0.301*** (0.026)	-0.014 (0.028)	-0.010 (0.021)	-0.086* (0.047)
age	0.001*** (0.0003)	0.0001 (0.0003)	0.00005 (0.0004)	0.0004 (0.0003)	0.002*** (0.001)
home_ovambo	0.055*** (0.009)	0.039*** (0.009)	0.039*** (0.009)	0.066*** (0.007)	0.307*** (0.016)
Constant	0.373*** (0.022)	0.378*** (0.021)	0.518*** (0.026)	0.741*** (0.017)	0.507*** (0.037)
N	4718	4757	3625	4639	3581
R-squared	0.066	0.070	0.017	0.053	0.132

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 64: Lesotho: Estimates of Enumeration area access to water

	rate water/san	rate own living	rate local council	rate president	vote lcd
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_water	0.102*** (0.012)	0.018** (0.009)	0.003 (0.014)	-0.016 (0.012)	-0.062** (0.030)
urban	-0.023 (0.014)	-0.013 (0.010)	-0.047*** (0.017)	-0.008 (0.014)	-0.091*** (0.031)
female	-0.004 (0.011)	-0.015* (0.008)	-0.012 (0.013)	-0.001 (0.011)	0.056** (0.027)
cashjob	0.047*** (0.018)	0.013 (0.013)	-0.002 (0.023)	-0.006 (0.018)	-0.008 (0.049)
educ	-0.017 (0.034)	0.126*** (0.025)	-0.150*** (0.042)	-0.230*** (0.035)	-0.573*** (0.092)
age	0.0005 (0.0003)	-0.001*** (0.0002)	-0.0001 (0.0004)	0.0001 (0.0003)	-0.0004 (0.001)
Constant	0.344*** (0.022)	0.251*** (0.016)	0.533*** (0.027)	0.697*** (0.022)	0.902*** (0.055)
N	4298	4675	3012	4170	1154
R-squared	0.020	0.016	0.011	0.016	0.071

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data

Table 65: Lesotho: Estimates of Enumeration area sewer line

	rate water/san	rate own living	rate local council	rate president	vote lcd
	Model 1	Model 2	Model 3	Model 4	Model 5
ea_sewer	0.057*** (0.020)	0.009 (0.015)	-0.010 (0.028)	0.0003 (0.021)	0.110* (0.057)
urban	0.007 (0.014)	-0.008 (0.010)	-0.044** (0.017)	-0.015 (0.014)	-0.129*** (0.031)
female	-0.005 (0.011)	-0.015* (0.008)	-0.012 (0.013)	-0.0004 (0.011)	0.056** (0.027)
cashjob	0.045** (0.018)	0.013 (0.013)	-0.001 (0.023)	-0.006 (0.019)	-0.016 (0.049)
educ	-0.021 (0.034)	0.126*** (0.025)	-0.148*** (0.042)	-0.231*** (0.035)	-0.596*** (0.092)
age	0.0004 (0.0003)	-0.001*** (0.0002)	-0.0001 (0.0004)	0.0001 (0.0003)	-0.0004 (0.001)
Constant	0.393*** (0.021)	0.259*** (0.015)	0.534*** (0.026)	0.690*** (0.022)	0.873*** (0.053)
N	4298	4675	3012	4170	1154
R-squared	0.005	0.015	0.011	0.016	0.071

\*\*\* p < .01; \*\* p < .05; \* p < .1  
Afrobarometer data



## REFERENCES

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