

Mobilizing Women Voters:
Experimental Evidence from Pakistan
Preliminary and Incomplete. Do Not Cite. *

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Abstract

Reducing the gender gap in politics remains a challenge in much of the developing world. We test one of the reasons behind the low turnout rates for women: a lack of political campaign targeted at women. Before the 2018 general elections in Pakistan, we randomized electoral areas, and within them ran a political campaign at the household level to inform women voters about the public service delivery performance of the incumbent politician. Our results suggest that women's turnout in the election increased substantially as a result of the information campaign as did the vote share of the incumbent. In a highly competitive environment, where the winning margin is 0.08% of the total polled votes, we find an increase of 13.3% in female turnout and an increase of 5.6% in the vote share of the incumbent politician. Furthermore, we find suggestive evidence that this response interacts with social norms in the area: women in areas where polling stations are of mixed gender respond strongly to the treatment, whereas women in areas where polling stations are gendered do not.

JEL Classification: C93, D72, D83, J16, K16.

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1 Introduction

Gender gap in political participation, especially voter turnout, is a common phenomenon (Forum 2013), but it is especially severe in developing countries such as Pakistan¹. Promoting female empowerment through increased political participation remains a core policy challenge. Past work has shown that political participation can serve to improve female specific public policy and service delivery (Chattopadhyay and Duflo 2004) but a gender gap exists despite these potential benefits.

One reason for the gap, in election turnout specifically, could be that women lack information on politics that is most aligned with their preferences. We test this through a precinct level randomized roll-out of an election campaign in one national assembly constituency. The campaign provided women voters information on women-specific development projects initiated by the incumbent before 2018 national election in Pakistan. This led to a higher turnout rate for women in the treated precincts and a higher vote share of the incumbent.

Politics in Pakistan is not representative in the true sense of the word, especially when it comes to women representation. Out of the 272 directly elected members of parliament only 8 are women — all except one belong to political dynasties. Reservation of seats is one possible policy lever to make politics more representative and by extension more responsive to the preferences of women (Beaman et al. 2011). But a more direct way of addressing the disparity in policies is to make women active in politics, especially in terms of turning out to vote on the day of elections. The benefits due to women’s participation in politics, such as women specific service delivery and overall improvement in welfare of marginalized groups, far out weigh the costs associated with voting on the day of elections. But despite the net benefit fewer women, compared to men, turn out to vote during the elections. There can be many reasons for this disparity such as norms associated with women’s position in the society (Jayachandran 2015), their economic opportunities (Heath and Mobarak 2015) or simply information about their policy preferences (Khan 2017).

The information barrier to women’s participation in elections has been discussed in literature from several dimensions. There may exist a lack of knowledge among the women on

¹As per Election Commission of Pakistan, male turnout in the most recent national elections held in 2018 was 60%, whereas female turnout was 39%.

how to vote (Giné and Mansuri 2018), which can potentially interact with social pressure associated with voting (or not) (Gerber et al. 2008). Further campaigns that impart civic education and associated knowledge may also be an important mechanism for making women to vote (Gottlieb 2016). But to our knowledge there does not exist a study that incorporates women specific messages in the campaigns of candidates. Since women hold different policy preferences compared to men (Chattopadhyay and Duflo 2004; Khan 2017), the status-quo campaigning does not address the issues women may care about which in turn may make women vote to appear dependent on men's. If it is in the politicians interest to court women, they will themselves make an effort to mobilize the female vote and include them more in the political process.

In this paper, we partnered with the incumbent politician to implement a get-out-the-vote campaign specifically targeted at the women. Precincts in one constituency of the national parliament of Pakistan in the district Kasur were randomized into either receiving a women focused campaign or not. A door to door canvassing campaign was implemented in the precincts chosen for the campaign, that informed the women about the development (policy) work undertaken by the incumbent in the constituency. The goal was to see if providing women the information about incumbents performance on policy areas that they may care about, can lead to more women deciding to turn out for voting, and to check if the incumbent benefits from it in the form of increased vote share.

We included 151 precincts in this experiment but due to administrative issues were able to collect electoral data for 107 areas only. In this sample, we document an increase of 12.8% (standard deviation 0.047) in female turnout, and an increase of 0.07% (standard deviation 0.020) in the vote share of the campaigning politician. The limited sample size meant that our results are only statistically significant for female turnout. Controlling for the baseline support of the incumbent in the form of vote shares from previous election, we see an increment of 5.6% (standard deviation 0.020) in his vote share on 61 polling stations².

It is important to increase female political participation not just because of equality concerns, but also because it has a huge impact on the economy and society at large. We

²Due to redistricting prior to the 2018 election, we only have the 2013 election vote share for 61 polling stations)

know that women as a group have different preferences from men, which will remain unheard and unattended due to low female political participation. Additionally, these differences in preferences have an impact on governments' spending preferences, which in turn effects growth and development differently (channels, effect size, distributional effects can all differ based on what governments prioritize). In developing countries, we know that women will prefer public services like clean drinking water, poverty alleviation schemes, public welfare, health over physical infrastructure like roads, bridges and transport ((Chattopadhyay and Duflo 2004); (Olken 2010); (Gottlieb et al. 2018); (Brule and Gaikwad 2017); (Khan 2017)). This clearly shows a substantial divide in terms of preferences between the two sexes, which can mean that the public services preferred by half of the population get comparatively neglected in most countries, with the incumbent general macroeconomic and developmental effects on the economy and society.

There is a dearth of evidence on whether female voters will reward politicians who focus on their public service preferences. The impediments faced by women to vote and even more importantly vote independently are substantial. Most women, like most Pakistanis, are poor and not hugely well-informed about politics and the process of voting ((Isaksson et al. 2014); (Giné and Mansuri 2018)). But evidence from mainly developed countries suggest that women voting can have substantial welfare effects for them, especially in the long run (Aidt and Dallal 2008). The extension of suffrage in the United States led to increases in welfare spending by state governments and increased the probability of enactment of prohibition laws (Lott 1999) and increases in spending on healthcare (Miller 2008).

This paper contributes to two strands of literature. First, it is in the spirit of a long line of academic studies that are focused on getting citizens out on the election day to vote. Gerber and Green (2017) conduct a meta-analysis of this work and find that door-to-door canvassing increases voter turnout the most, followed by volunteer messages. Most of the studies in this literature focuses on targeting the individuals and their decision. But recently, the focused has shifted to more aggregate level outcomes. Pons (2018), is the first to show in a precinct-level randomized study that that door-to-door campaigning by a presidential candidate led to higher vote share for the candidate, though it did not increase turnout. We extend this literature by showing that it is possible to increase turnout and also improve

vote share of candidates.

Second, this work relates to the literature on informational treatments focused on the platform and civic duties of voters. When voters in slums are provided accurate, factual information about political candidates, it increases turnout, reduces susceptibility to vote-buying, and changes voting decisions to reward better performing candidates (Banerjee et al. 2011). Similarly, (Green and Vasudevan 2018) show that a radio campaign run by them decreased the vote share of parties that engaged in vote buying. We extend this literature by showing that voters not only punish the incumbents for poor performance but also reward the incumbents based on the information provided.

In rest of the paper, we first describe the experiment and lay out the implementation details. This is followed by a section on results and the associated discussion. Lastly, we report heterogeneous effects to tease out who may have responded to the treatment.

2 Research Design and Implementation

Our sample consists of 151 electoral areas in NA-140, a National Assembly (NA) constituency in the district of Kasur, Punjab, Pakistan (Punjab being Pakistans most populous province). Some of these areas fall within the small cities of Phoolnagar and Pattoki, while other areas are completely rural. Hence, there is substantial variation in terms of average income, employment, community relations as well as political party support in our sample. However, this sample got diluted due to changes made by the Election Commission of Pakistan in how they reported data, which is explained in detail below.

The treatments were as follows:

Treatment I (Women Only): Only women are surveyed and given the information treatment

Treatment II (Women and Men): While only women are surveyed, both women and men are given the informational treatment (if no man was present in the house, the female respondent was asked to share the informational treatment him later)

The control was a pure control: no information of any type was shared and no survey was conducted. This was essential because even if a simple survey had been conducted, it

would have had an element of a campaign because the team was eventually known to be campaigning for the incumbent and they would have been associated with the incumbent regardless of whether a campaign was actually conducted or not.

The information treatment consists of a brochure that is delivered physically and verbally to the respondent (by a team of female enumerators). The information given is about actually public service delivery undertaken by the incumbent over the last five years. It covers areas that are deemed more important to female voters: provision of natural gas in homes for cooking, construction of schools, provision of safe drinking water through water filtration plants, women-only parks and vocational courses, stable provision of electricity, and better sewerage systems. The brochure was written in Urdu, the national language of Pakistan, however, as many people who not be able to read, the brochures were verbally explained to everyone. Additionally, the brochure featured photos for all these services to make understanding it easier and the photos showed only women engaging in related work. A copy of brochure is provided in appendix in figure 5.4.

While the analysis will be conducted at the electoral area level, the treatment was delivered to a random sample of households in the electoral areas. An important change vis-a-vis our analysis was that we had aimed for a one-to-one mapping from official electoral results to electoral areas. However, due to the fact that the constituencies had been redrawn in 2018 meant that information about electoral areas and polling stations that was initially provided to us did not match with the final implementation plan of the Election Commission of Pakistan. Hence, in some places, within electoral areas we have various polling stations, some of which have been treated, while others were not. This unexpected change required a change from the specified models in our pre-registration plan.

As the information campaign was randomly delivered at the household-level, the household selection protocol is of relevance. The team of female canvassers goes to an area and spreads out in different directions, so as not to bunch up surveys in one sub-area. In larger areas, it was ensured that the team spreads out in every direction keeping in mind that there can be heterogeneity even within area, depending on sub-locality. Then a door-to-door campaign was conducted.

The canvassers would introduce themselves as being from a research team lead by Dr.

Karrar Hussain, and were told that they were working with the incumbent. They were provided with a letter of support from the Lahore University of Management Sciences. The respondent had to be the woman who wielded influence in the household. A survey is conducted first, and then the brochure is handed over to the respondent and explained. For treatment two, while the survey is conducted with the women only, the brochure is explained to both the woman and man at the same time (if the man is present at home; if he isn't the woman is told to share the brochure with the man when he gets home).

2.1 Sample Details and Summary Statistics

In May 2018, two months before the general election, polling schemes of 272 national assembly (NA) seats were made available to the public by the Election Commission of Pakistan (ECP). They contained information about each NA seat and the associated polling stations, including details such as number of voters by gender and types of polling booths (mixed or gender-segregated). It is pertinent to mention that the experimental assignments took place after the voter registration period had ended. This ensures that registration is orthogonal to treatment assignment.

For our intervention, as our primary interest was in decisions of female voters, we focus on female-only and mixed-gender booths (excluding the third type – male-only booths). Another criteria for sample selection was population size (as measured by the 2017 Pakistan Census): we chose electoral areas that had at least 250 households. The primary reason for this restriction were time constraints and logistical issues explained above. Additionally, after creating this lower bound, we still had a lot of variance in household numbers across areas, so we selected electoral areas by creating four area size blocks, with 25 percent of the sample in each area size strata.

After the election, instead of announcing results at an electoral area level (as indicated strongly by the ECP itself), it announced election results at the polling station level. It did this through two main official forms: Forms 45 and 48. Form 45 is an official electoral document signed and stamped by the Presiding Officer (highest election official in the polling station) and the polling agents of all parties (representatives of each party present in the polling station to ensure nothing partisan or inappropriate happens). A typical Form-45

Table 1: Summary Statistics

	# of Obs	Mean	Standard Deviation	Median
Pre-Election				
Male Voters	107	1853.72	1336.98	1384
Female Voters	107	1359.55	994.76	977
Households	107	919.71	709.30	646
Female Booths	107	0.35	0.48	0
City	107	0.26	0.44	0
Coverage intensity	107	0.42	0.26	0.38
Post-Election				
PML(N) Share	107	0.41	0.10	0.42
Female Turnout	99	0.47	0.35	0.38
Male Turnout	65	0.51	0.34	0.41

Notes: Pre & post 2018 election summary statistics.

contains (other than identifying information) the number of total registered votes (male and female separately), votes cast for each candidate, rejected votes and total valid cast votes (male and female separately). Form-48 is the aggregate of Form-45 for one whole constituency, which contains information on constituency-wide count of votes for each candidate, but does not provide any voting behavior information along gender lines.

After the election, using the polling station-based results, we were able to retrieve results for 119 out of 151 electoral areas of our sample. We were unable to recover data from 32 electoral areas due to last-minute policy changes introduced between May and July 2018 that merged different electoral areas into different polling stations. Additionally, in 12 of the remaining 119 electoral areas, data was unusable as treatment and control electoral areas were mixed at the polling station level – hence we would not be able to cleanly separate treatment and control areas. Of the results for the remaining 107 electoral areas, there were 8 electoral areas for which we only had Form-48 information only – hence, we had data on turnout and vote share but not disaggregated along gender. In short, due to bureaucratic and logistical challenges beyond our control, the experimental sample consisted of 107 electoral areas for which we have the total turnout and vote share by politician and 99 electoral areas for which we have the same information with information on turnout disaggregated by gender. The reduction of our sample means that our analysis mainly relies upon the first specification of our pre-registration plan, which pools together both treatments (women are provided with candidate informational treatment in both treatment groups).

Tables 1-3 summarize our sample on the 2017 Pakistan census, ECP polling schemes and official electoral results. In Table (1), we provide summarized statistics of the 107 available electoral area and polling station combinations and in Tables 2-3, we show balance tests for our sample.

There were 198,348 male and 145,471 female registered voters across 98,408 households. In Table 1, we show, per an electoral area, the average number of male and female voters is 1853 and 1359 respectively, the average number of households is 919, the percentage of female booths is 35%, the proportion of electoral areas that are urban is 26% and the coverage intensity (the proportion of treated households out of total households in an electoral area) is 42%. After the election, the PML(N) votes averaged at 41%, with 47% of female and 51% of male voters turning out.

To ascertain whether the treatment groups are indeed balanced in our sample, we conducted balance along two main lines: (i) different sample sizes and (ii) overall (pooled) or sub-treatment level. We have our initial sample of 151 electoral areas, followed by a sample of 107 electoral areas (turnout data without gender disaggregation and vote share) and a sample of 99 electoral areas (turnout data with gender disaggregation and vote share). We compare them by looking at the number of male voters, the number of female voters, the number of households and the number of female booths.

Table 2: **Balance by Overall Treatment**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)	Missing T. Turnout (5)	Missing G. Turnout (6)	Missing 2013 Data (7)
Treatment Areas	1566.711 (95.584)	1159.611 (75.231)	786.920 (25.761)	0.402 (0.081)	0.299 (0.078)	0.406 (0.083)	0.704 (0.076)
Control Areas	1658.044 (139.440)	1218.921 (104.137)	793.813 (54.914)	0.259 (0.090)	0.258 (0.089)	0.357 (0.097)	0.621 (0.105)
Joint orthogonality p-value	0.53	0.58	0.92	0.08	0.58	0.53	0.35
# Areas	151	151	151	151	151	151	151

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 2 presents the balance between treatment and control groups and pools together both treatments (Treatment I and II). The first and second row represent treatment status of the electoral areas and the third row presents a p -value corresponding to joint tests of equality using the aforementioned variables for testing. In addition to showing balance on

the aforementioned variables, we additionally show it for the data that we are missing: total turnout, female turnout and 2013 election data. Since our primary focus was on female voting behavior, the percentage of female booths were relatively high by design in our sample. As we'd expect, consistent with randomization, of the 7 tests performed, the tests performed on percentage of female only vs combined booths suggests marginal imbalance at the baseline. However, we present below results both with and without controls to alleviate any concerns about the randomization.

Table 3: Balance by Sub Treatment

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)	Missing T. Turnout (5)	Missing G. Turnout (6)	Missing 2013 Data (7)
Women Only	3407.620 (244.429)	2486.639 (174.176)	1837.375 (108.971)	0.501 (0.102)	0.211 (0.080)	0.196 (0.081)	0.579 (0.103)
Women +Men	3530.685 (296.274)	2562.242 (219.487)	1927.157 (147.148)	0.414 (0.098)	0.149 (0.090)	0.154 (0.091)	0.607 (0.097)
Control Areas	3261.222 (253.066)	2364.433 (179.819)	1825.121 (112.023)	0.384 (0.103)	0.211 (0.084)	0.221 (0.085)	0.514 (0.102)
Hypothesis tests p-values							
Joint orthogonality p-value(A=B=C)	0.31	0.27	0.42	0.48	0.72	0.77	0.64
A-C =0	0.33	0.24	0.83	0.24	0.99	0.79	0.51
B-C=0	0.14	0.13	0.20	0.76	0.49	0.47	0.35
# Areas	151	151	151	151	151	151	151

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 3 shows the balance tests by sub treatment status (disaggregated treatments). As explained before, we implemented two treatments: providing information to women only in one treatment and providing information to both women and men in the other. We conduct three tests, with p -values shown corresponding to joint test of equality and equality tests between control and sub treatments arms. We find the same overall results as above: consistent with the randomization, we can see that no difference exists between the groups.

Finally, we explained above, we could not recover results for the the whole sample of 151 electoral areas. Hence, we show below the balance table for this sample in particular.

The results are not much different from the Table 2. We only suffer from partial imbalance when it comes to how many female voters there are in the area, hence we control for this variable in some specifications, which, as can be seen below, does not change our results substantially.

Table 4: **Balance by Overall Treatment: Availability of Total Turnout**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Treatment Areas	734.503 (63.158)	544.169 (46.978)	315.367 (22.565)	0.263 (0.095)
Control Areas	660.689 (130.355)	476.026 (100.137)	279.153 (63.609)	0.105 (0.102)
Joint orthogonality p-value	0.64	0.58	0.65	0.09
# Areas	107	107	107	107

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

3 Empirical Strategy and Results

3.1 Empirical Strategy

Using official data from the Election Commission of Pakistan for the general elections of 2013 and 2018 in NA-140 at the polling station level and the randomization built into experiment, following are the set of regression specifications that we use to analyze the impact of our treatments on voting behavior. We start with the pooled specification:

$$Y_i = \alpha + \beta_1(Treatment)_i + (Block\ Fixed\ Effects)_i + \epsilon_i \quad (1)$$

where Y_i is the outcome of interest in electoral area i . In our experiment, we consider total, female and male turnout along with the difference between male and female turnout as the main outcomes of interests. Additionally, we are also interested in the vote share of the two main candidates (eventually, and as expected, the winner and runner-up). We have pooled both treatments together as we provided information about the incumbent’s female-specific work to women in both treatment groups, hence $Treatment_i$ is a binary variable for the pooled treatments which is 1 when the area was provided information about the incumbent’s work and 0 for a control area (where no treatment was offered). We included block fixed effects because as explained, we stratified on area population size in the design phase. The standard errors are clustered at the block level.

Our second specification separates Treatment I and II, with the aim of allowing us to tease mechanisms for voting behavior change as we treated different individuals in each

treatment. We estimate the following model:

$$Y_i = \alpha + \beta_1(Treatment)_{1i} + \beta_2(Treatment)_{2i} + (Block\ Fixed\ Effects)_i + \epsilon_i \quad (2)$$

where Y_i is the same electoral area i outcome of interest as defined in the first specification. $Treatment_{1i}$ is a binary variable for Treatment I (women only campaign), which is 1 when the area was provided information about the incumbent's work and 0 for a control area (where no treatment was implemented). Similarly, $Treatment_{2i}$ is a binary variable for Treatment II (both women and men campaign), which is 1 when the area was provided information about the incumbent's work and 0 for a control area. The aim of this specification is to allow us to tease out whether our initial results are driven by women making decisions independently from men in the household, or whether the effect on our outcomes is driven through male household members.

In order to improve precision of our estimates of pooled treatment and sub-treatment effects for candidate vote share, we control for candidate vote share in the 2013 elections.

3.2 Results

We analyze the impact of our information campaign about the incumbent's women-centric public service delivery on voter turnout and candidate (party) choice.

In table 4, we show results from both specifications (pooled and disaggregated), focusing on the effect on turnout (total, female, male, difference between female and male). On the left, we have the pooled specification and we can see that while the effect on total turnout is not significant, female turnout in treatment areas increases by 13.3%. This is what we would expect after running a campaign by women, focused on delivering information mainly to women and delivering information that is of most relevance to women. As explained before, due to our focus being mainly female voting behavior, our sample consists of female-only and combined-gender polling booths only (excluding male-only polling booths). Hence, our sample size is smaller when we analyze the effect of our treatment on male turnout (as female-only booths are not irrelevant to the analysis), but we believe that the difference in turnout narrowing by 4.2% (significant at the 10 percent level) is indicative and logical

after a large 13.3% increase in female turnout and no statistically significant effect on male turnout.

An increase of 13.3% in female turnout is substantial considering the huge, pervasive difficulties women face in voting (as explained in detail above) and considering the fact that this was a heavily contested race. The two main rivals have been fighting in this constituency since the 1960s and campaign heavily for many months, spending huge sums on election day in particular to ensure their supporters have the necessary transportation and motivation to reach polling stations and vote for them (the context on the contest is explained in greater detail in the Appendix). In an environment when all parties have toiled for many months to ensure they get all possible vote out, our intervention delivered a 13.3% increase in the turnout of the gender for which it is hardest to increase turnout. The effect on female turnout of our intervention is larger than that of previous work, such as (Giné and Mansuri 2018), which finds an increase of 12 percent through its female-centered get-the-vote-out intervention.

Table 5: **Effect on turnout**

	Pooled Treatment				Disaggregated Treatment			
	Total Turn Out	Turn Out, Female	Turn Out, Male	Turn Out, Diff	Total Turn Out	Turn Out, Female	Turn Out, Male	Turn Out, Diff
Treatment	0.014 (0.040)	0.111*** (0.038)	0.068 (0.046)	-0.042** (0.020)				
Women Only Campaign					0.044 (0.055)	0.109** (0.051)	0.088 (0.068)	-0.058** (0.027)
Women + Men Campaign					-0.010 (0.043)	0.099** (0.050)	0.014 (0.044)	-0.041* (0.023)
Control Mean	0.355	0.437	0.456	0.092	0.355	0.437	0.456	0.092
Number of Polling Stations Fixed Effects	99	99	65	65	99	99	65	65

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects. Controls for total number of registered female voters.

On the right in table 15, we have the disaggregated treatment, showing the effect on outcomes of each of our two treatments (women only and women + men campaigns). These results are also in line with the effects of the pooled treatment: we see no statistically significant effect on total or male turnout, while there is a positive significant effect on female turnout for both campaigns and a positive significant effect on the female-male turnout gap for the *women only campaign*. Looking at female turnout, we see that the impact of the

women only campaign is 13.7% and the effect of the combined women+men campaign is 12% (the difference is statistically insignificant). Hence, both campaigns had a strong, statistically significant effect on female turnout. The last column shows the effect of the campaign on the gap between male and female turnout. As the sample here is smaller, it is harder to detect effects: for the women only campaign, we find a reduction in the gap by 5%, which is statistically significant only at 10%.

Overall, it appears that the women-centric campaign encouraged women voters to go out and vote across the board, irrespective of party affiliation, therefore tightening the race. Compared with the 2013 elections, this election has overall lower voter turnout (nationally). The strong increase in female turnout in the treatment areas suggests that the information campaign either increased the marginal benefit of voting or reduced the marginal cost of voting.

Table 6: **Effect on Vote Share**

	Pooled Treatment		Disaggregated Treatment	
	Vote Share, PML(N)	Vote Share, PTI	Vote Share, PML(N)	Vote Share, PTI
Treatment	0.012 (0.021)	-0.003 (0.023)		
Women Only Campaign			0.031 (0.022)	-0.016 (0.027)
Women + Men Campaign			-0.029 (0.025)	-0.002 (0.028)
Control Mean	0.407	0.418	0.407	0.418
Number of Polling Stations	107	107	107	107
Fixed Effects	Block	Block	Block	Block

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

We now shift our focus from turnout to vote share. We want to see whether our information campaign on behalf of the incumbent made voters reward him for his women-centric public service delivery. In table 7, we present the effects of both the pooled and disaggregated treatments on candidates' vote share in a parsimonious specification framework (without controlling for the baseline vote share, i.e. the 2013 election vote share). We see no statistically significant effect of campaigning on vote share in either specification. However, as we see a strong effect on turnout, we believe that we are not able to detect an effect here due to reduced sample size (due to aforementioned administrative reasons) because we would expect the true effect on vote share to be lower compared to the true effect on turnout as a

change in voting behavior is harder. Hence, we are unable to detect this smaller potential true effect. Therefore, as natural next step, we include baseline controls to improve the precision of our estimates.

Table 7: **Effect on Vote Share**

	Pooled Treatment		Disaggregated Treatment	
	Vote Share, PML(N)	Vote Share, PTI	Vote Share, PML(N)	Vote Share, PTI
Treatment	0.002 (0.024)	-0.003 (0.025)		
Women Only Campaign			0.050* (0.027)	-0.025 (0.029)
Women + Men Campaign			-0.020 (0.029)	-0.004 (0.031)
13 Vote Share	0.312*** (0.085)	0.350*** (0.084)	0.309*** (0.082)	0.351*** (0.085)
Control Mean	0.407	0.418	0.407	0.418
Number of Polling Stations	61	61	61	61
Fixed Effects	Block	Block	Block	Block

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

In table 7, we show results for the effect of our campaign on vote share of the incumbent (PML-N) and the challenger (PTI) when we control for the 2013 election vote share of each candidate³. We see no effect for the pooled treatment on either candidate's vote share. We also see that there is some inertia in vote shares from the previous election for both candidates, as one would expect knowing that voting choices are not easily malleable and often changed. However, we find a positive effect of 5% (statistically significant at the 10% level) on the incumbent vote share for the *women only campaign*. We detect no effects for the women and men campaign. This is what we expected, as due to the aforementioned last minute administrative changes by the ECP, we had a much smaller sample size. Hence, by controlling for a baseline variable, we can make our treatment effect estimate more precise.

These results suggest that a campaign which was led by the women for the women, that provided information focused on women, had a substantial effect on female turnout and incumbent vote share in a political environment where women-centric campaigns are non-existent. These effects are consistent with the idea of women being sensitive to information

³As explain in the contextual explainer in the Appendix, the incumbent and challenger were also the main two rivals in this constituency in 2013

in the form of a campaign, and that they reward politicians who implement women-centric policies.

3.3 Channels

The large effects on female turnout reported above raise an important question about the extent to which the campaign has any heterogeneous effects depending on booth type – female versus combined. We can expect that social norms vis-a-vis electoral norms and practices in places with combined polling booths (in contrast to female-only polling booths) are different as women will be more used to going out in gender unsegregated places and comparatively less dependent on men.

Table 8: **Heterogeneous Effects on Booth Type**

	Pooled Treatment		Disaggregated Treatment	
	Turn Out, Female	Turn Out, Female	Turn Out, Female	Turn Out, Female
Treatment	0.071 (0.070)	0.110** (0.054)		
Women Only Campaign			-0.035 (0.095)	0.172** (0.079)
Women + Men Campaign			0.128 (0.090)	0.056 (0.054)
Control Mean	0.322	0.365	0.322	0.365
# Areas	34	65	34	65
Sample	Female PS	Combined PS	Female PS	Combined PS
Fixed Effects	Block	Block	Block	Block

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Regressions use data from places where polling stations were not merged.

In table 8, we can see that for the pooled treatment, there is a statistically significant effect of the campaign on female turnout for combined polling booths: the information campaign increased female turnout by 11%. In contrast, while the sample size is smaller for female-only booths, there is no statistically significant effect for female-only booths and the magnitude is two orders of magnitude small. Looking at the disaggregated treatment, as before, we find strong effects for the women only campaign and as with the pooled results, for combined polling booths: for combined polling booths where we conducted a women only campaign, there was an increase of 17.2% in female turnout. Hence, this shows that where the gender

segregation norms are relaxed in terms of voting the effect of women-centric campaigns are higher and significantly different compared to areas where voting gender norms are strict.

4 Conclusion

In this paper we provide evidence on women's responsiveness to information campaigns. The paper extends literature on getting women out to vote with the aim of reducing gender gap in voting on the election day. Existing efforts have focused on non-partisan get-out-the-vote campaigns and civic education. While these are important avenues of increasing women turnout the literature has a gap on what could be done within the organic political campaigns of parties and candidates to achieve the goal of equality in politics. In this paper, we make a contribution towards filling that one particular gap.

Women have different policy preferences than men in many developing countries. However, the conventional assumption is that they vote according to the preferences of the men of their families. This understanding latently assumes that women do so with the full knowledge of what they want and what their representatives provide. In the paper we provide evidence that women may not be completely informed about their representatives. When they are provided information about the women-specific policy actions and development projects of the incumbent they turnout more on the election day.

We consider this to be an important finding especially from policy perspective. It will help address at least one of the structural reason behind the gender gap. The politicians and parties follow the conventional wisdom that women are not independent voters and that households act as a unitary agent when deciding whether to vote or no. However that appears not to be the case. Women do appear to make an independent decision about voting. And it is not just the decision to take the costly action of traveling to a polling station, but also how they vote. If incumbent takes actions that are generally in line with issues the women care about then highlighting them in election campaign helps the candidate. We believe this paper also provides an important avenue for future research. At present one limitation of the paper is that it cannot separate the effect of campaigning from campaign that provides information. It also provides suggestive evidence that norms matter since the

effect is bigger in areas where men and women can vote in the same polling station. In all this paper extends the important literature on bridging the gender gap in politics and also opens-up avenues for potential research.

References

- Aidt, T. S. and Dallal, B. (2008). Female voting power: The contribution of women's suffrage to the growth of social spending in Western Europe (1869-1960). *Public Choice*, 134(3-4):391–417.
- Banerjee, A., Kumar, S., Pande, R., and Su, F. (2011). Do informed voters make better choices? Experimental evidence from urban India. *Journal of Development Studies*, (nov):46.
- Beaman, L., Duflo, E., Pande, R., and Tapalova, P. (2011). Political Reservation and Substantive Representation: Evidence from Indian Village Councils. *India Policy Forum 2010 / 2011*, page 159–202.
- Brule, R. and Gaikwad, N. (2017). Culture, Capital and the Gender Gap in Political Economy Preferences: Evidence from Meghalaya's Matrilineal Tribes. *Working Paper*.
- Chattopadhyay, R. and Duflo, E. (2004). Women as Policy Makers: Evidence from a Nationwide Randomized Experiment in India. *Econometrica*, 72(5):1409–1443.
- Forum, W. E. (2013). *Insight Report: The Global Gender Gap Report 2013*.
- Gerber, A. and Green, D. (2017). Field Experiments on Voter Mobilization. 1:395–438.
- Gerber, A. S., Green, D. P., and Larimer, C. W. (2008). Social pressure and voter turnout: Evidence from a large-scale field experiment. *American Political Science Review*, 102(1):33–48.
- Giné, X. and Mansuri, G. (2018). Together we will: Experimental evidence on female voting behavior in Pakistan. *American Economic Journal: Applied Economics*, 10(1):207–235.

- Gottlieb, J. (2016). Why Might Information Exacerbate the Gender Gap in Civic Participation? Evidence from Mali. *World Development*, 86:95–110.
- Gottlieb, J., Grossman, G., and Robinson, A. L. (2018). Do Men and Women Have Different Policy Preferences in Africa? Determinants and Implications of Gender Gaps in Policy Prioritization. *British Journal of Political Science*, 48(3):611–636.
- Green, D. P. and Vasudevan, S. (2018). Diminishing the Effectiveness of Vote Buying: Experimental Evidence from a Persuasive Radio Campaign in India. *Ssrn*.
- Heath, R. and Mobarak, M. (2015). Manufacturing growth and the lives of Bangladeshi women. *Journal of Development Economics*, 115:1–15.
- Isaksson, A.-S., Kotsadam, A., and Nerman, M. (2014). The Gender Gap in African Political Participation: Testing Theories of Individual and Contextual Determinants. *Journal of Development Studies*, 50(2):302–318.
- Jayachandran, S. (2015). The Roots of Gender Inequality in Developing Countries.
- Khan, S. (2017). Personal is Political: Prospects for Women’s Substantive Representation in. pages 1–37.
- Lott, J. R. (1999). How Dramatically Did Women’s Suffrage Change the Size and Scope of Government? *Ssrn*, 107(6).
- Miller, G. (2008). Women’s suffrage, political responsiveness, and child survival in American history. *Quarterly Journal of Economics*, 123(3):1287–1327.
- Olken, B. A. (2010). Direct democracy and local public goods: Evidence from a field experiment in Indonesia. *American Political Science Review*, 104(2):243–267.
- Pons, V. (2018). Will a five-minute discussion change your mind? A countrywide experiment on voter choice in France. *American Economic Review*, 108(6):1322–1363.

5 Appendix

5.1 Context

The constituency we worked in, Kasur-IV, is a particularly interesting constituency to study because of how highly competitive it is. There were only two competing candidates from two parties because of the fact that both politicians are extremely strong, politically active since decades and hence nobody deems it worthwhile to even try to enter the fight between them. In contrast, for the provincial assembly seats in this constituency (two), there were multiple challenges for both these parties. In PP-181, one of the provincial seats within this national assembly seat, there were a total of nineteen contestants. In PP-180, the other provincial seat, there were a total of thirteen contestants.

The rivalry between the two families, Ranas and Nakais, goes back to 1960s. Hence other than just political power, the election becomes a contest of two families' egos. This is why the amount of effort they have to make is huge. The whole families – brothers, cousins (all male) – are heavily involved. In particular, with the advent of cheap mobiles and internet and social media, the effort required and the person-to-person contact has increased. In the days we conducted the surveys, we visited a few campaign visits. The visits are made to individual voters houses to convince them to vote. The winner in this constituency has always been a Rana or a Nakai since the creation of Pakistan. This is why preferences would be expected to be strongly set in because people develop dependency networks based on employment, patronage, caste affiliation. In such a scenario, where your opponents' voters aren't easy to prise away and where no one is willing to cease even an inch of space, it is particular difficult to effect voter turnout and voter choices.

5.2 Fieldwork

A typical day in the field was as follows: the survey team, having chosen areas to campaign in the last before (from the random list that the authors had created), would leave in the morning together and then work as one to four teams, in one to four areas, depending on the size of the area to be covered, the closeness of other chosen areas. They would get off in the

center of the area and then spread around, conducting their work, always in the supervision of one member of the survey team. The author in the field would visit each area randomly to ensure quality of work. However, due to the fact that we were running a campaign so close to elections and running one specifically for women, the campaign became quite contentious, with local leaders and eventually senior political leaders from opposing parties who took umbrage at such a campaign. The police was unwilling to help, hence the survey team had to work, eventually, in rather difficult conditions in some areas. This led to strategies to deal with this problem, including getting more official support from the government, to assuage critics as well as an official letter of support from LUMS.

Due to these challenges, it took longer to complete the survey work that we expected, which is the reason for us being unable to complete the whole sample. We started surveying, with a small test run, on 01 July 2018 and ended the work on 19 July 2018. The elections were held on 25 July 2018.

Another problem faced due to initial data issues was that the randomization was done at the electoral area level, however, results were acquired at the polling station level (official Election Commission of Pakistan data). There can be multiple electoral areas that are served by one polling station.

The work was suspended on four occasions: on 04 July due to illness, on 10 and 11 July due to payment issues, and on 15 July due to an internal re-calibration as to how to tackle the work with increasing difficulties and extended timeline.

5.3 Additional Balance Tables

We present below additional balance tables and different results with and without controls. These results presented in the main body are not effected much with the additional or exclusion of these controls as can be seen below.

5.4 Brochure

خواتین کیلئے ترقیاتی کام

(PML(N)) رانا محمد حیات خاں
NA-140

پچھلے پانچ سالوں میں رانا محمد حیات خاں کے کیے ہوئے خواتین کیلئے ترقیاتی کاموں کی تفصیل:

لیڈ بیز پارک، لائبریری، لیڈیز کیلئے ہال (پھولنگرسٹی)

خواتین کیلئے اسپیشل سستی کلاسز صرف 400 روپے میں: کوکنگ، کمپیوٹر، انگریزی، بیوٹیشن ٹریننگ

سوئی گیس کی فراہمی

103 دیہات میں سوئی گیس

بچیوں اور بچوں کی اعلیٰ تعلیم

7 نئے ڈگری کالجز
بھگیا نہ بوائز، نتھے جاگیر گرز، بہڑ وال گرز، ہلہ بوائز، سمرائے نعل گرز، ہنجرائے کلاں، جمر گرز

2 ڈگری کالجز میں نئی تعمیرات
106 نئے ہائی سکول

سیوریج کا بہترین نظام

پورے پھولنگر میں 50 کروڑ روپے کی لاگت سے سیوریج کا بہترین نظام

بجلی کی فراہمی

216 دیہات میں بجلی کے دیرینہ مسائل کا بہترین حل
نئے ٹرانسفارمرز اور کھمبوں کی فراہمی

صاف پانی کی فراہمی

دیہات میں واٹر سپلائی کا نظام اور بے شمار واٹر فلٹریشن پلانٹ

Figure 1: Brochure used in door to door campaigning

Table 9: **Balance by Overall Treatment: Availability of Total Turnout**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Treatment Areas	734.503 (63.158)	544.169 (46.978)	315.367 (22.565)	0.263 (0.095)
Control Areas	660.689 (130.355)	476.026 (100.137)	279.153 (63.609)	0.105 (0.102)
Joint orthogonality p-value	0.64	0.58	0.65	0.09
# Areas	107	107	107	107

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 10: **Balance by Sub Treatment: Availability of Total Turnout**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Women Only	680.750 (116.998)	490.529 (88.262)	278.908 (49.781)	0.262 (0.111)
Women +Men	864.392 (115.418)	652.465 (93.353)	376.323 (57.056)	0.254 (0.112)
Control Areas	512.894 (121.501)	366.916 (92.297)	227.767 (52.861)	0.123 (0.105)
Hypothesis tests p-values				
Joint orthogonality p-value(A=B=C)	0.15	0.13	0.27	0.38
A-C =0	0.30	0.29	0.41	0.22
B-C=0	0.05	0.05	0.12	0.25
# Areas	107	107	107	107

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 11: **Balance by Overall Treatment: Availability of Gender Turnout**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Treatment Areas	726.709 (62.585)	534.195 (48.127)	320.433 (22.440)	0.237 (0.099)
Control Areas	632.091 (140.823)	460.768 (108.530)	283.625 (69.599)	0.111 (0.110)
Joint orthogonality p-value	0.58	0.57	0.67	0.19
# Areas	99	99	99	99

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 12: **Balance by Sub Treatment: Availability of Gender Turnout**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Women Only	1626.228 (157.253)	1177.522 (125.551)	766.115 (58.239)	0.442 (0.127)
Women +Men	1808.214 (158.309)	1330.751 (121.614)	865.760 (67.064)	0.418 (0.120)
Control Areas	1462.354 (152.319)	1061.226 (116.242)	715.907 (57.400)	0.305 (0.109)
Hypothesis tests p-values				
Joint orthogonality p-value(A=B=C)	0.19	0.20	0.33	0.45
A-C =0	0.34	0.34	0.45	0.24
B-C=0	0.07	0.08	0.15	0.33
# Areas	99	99	99	99

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 13: **Balance by Overall Treatment: Availability of 2013 Data**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Treatment Areas	1576.580 (150.502)	1109.924 (107.769)	829.625 (42.329)	0.164 (0.136)
Control Areas	1565.788 (178.976)	1093.507 (127.972)	762.125 (49.345)	0.170 (0.118)
Joint orthogonality p-value	0.95	0.89	0.24	0.96
# Areas	61	61	61	61

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 14: **Balance by Sub Treatment: Availability of 2013 Data**

	Male Voters (1)	Female Voters (2)	Total Households (3)	Female Booths (4)
Women Only	712.545 (162.954)	491.054 (115.899)	335.333 (59.725)	0.380 (0.157)
Women +Men	740.748 (114.018)	520.677 (83.519)	315.212 (34.853)	0.310 (0.152)
Control Areas	713.647 (143.833)	498.011 (96.991)	266.296 (41.619)	0.327 (0.164)
Hypothesis tests p-values				
Joint orthogonality p-value(A=B=C)	0.98	0.98	0.55	0.90
A-C =0	1.00	0.96	0.38	0.73
B-C=0	0.87	0.86	0.40	0.91
# Areas	61	61	61	61

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.

Table 15: **Effect on turnout**

	Pooled Treatment				Disaggregated Treatment			
	Total Turn Out	Turn Out, Female	Turn Out, Male	Turn Out, Diff	Total Turn Out	Turn Out, Female	Turn Out, Male	Turn Out, Diff
Treatment	0.020 (0.041)	0.133*** (0.045)	0.068 (0.064)	-0.042* (0.023)				
Women Only Campaign					0.043 (0.056)	0.137** (0.058)	0.122 (0.086)	-0.050* (0.027)
Women + Men Campaign					-0.003 (0.042)	0.120** (0.059)	0.016 (0.064)	-0.040 (0.026)
Control Mean	0.355	0.437	0.456	0.092	0.355	0.437	0.456	0.092
Number of Polling Stations	107	99	65	65	107	99	65	65
Fixed Effects	Block	Block	Block	Block	Block	Block	Block	Block

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Uses robust standard errors and block fixed effects.