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The gap within: impact of separate-gender polling stations on turnout

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Abstract
Governments in several countries create separate-gender polling stations to encourage female voting. Yet, little is known about the effectiveness of this policy. We estimate the impact of separate-gender polling stations on voter turnout using administrative data from the 2018 general election in Pakistan. We find that being assigned to separate-gender polling stations reduces turnout for both women and men by 2 and 1 percentage points respectively, when compared to mixed-gender polling stations. Our results remain consistent after controlling for the role of resources, norms and mobility-related costs. Together, these results indicate that separate-gender polling stations do not alleviate gender-based voting constraints faced by women and instead increase non-gendered costs of voting for both women and men. In a context where female participation in political life is low to begin with, this policy presents an additional barrier for women's voting while having unintended consequences for men's voting.

Keywords
Women's voting; Political participation; Gender gap; Separate-gender polling stations

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1. Introduction

There are large and persistent gender gaps in political participation in the developing world (Prillaman 2017). Women are less likely to vote, run for office, campaign, canvass or make demands on those in government (Chhibber 2002; Parthasarathy et al. 2017; Khan 2017). Female political participation could be hindered by gender-specific factors such as access to fewer resources, a 'gendered psyche', or the limited mobilization of women (Burns et al. 2001; Fox and Lawless 2010; Preece 2016; Giné and Mansuri 2018; Cheema et al. 2019; Iyer and Mani 2019; Goyal 2020). It could also be affected by non-gendered factors that affect both women and men. For example, additional costs imposed by administrative voting processes could have large effects on turnout (Downs 1957; Brady and McNulty 2011; de Kadt 2017).

Governments in certain developing countries have adopted the use of separate-gender polling stations to encourage female voting (UN Women and United Nations Development Programme 2015).[3] This policy aims to overcome constraints around safety and cultural norms faced by women by providing them with a separate space to vote. In cultures where women tend not to interact with unrelated men, having separate spaces to vote, with women staff and other facilities, is expected to increase access for women voters (UN Women and United Nations Development Programme 2015). At the same time, having separate-gender polling stations might lead to deployment of additional resources, and may also make women more vulnerable in the face of electoral violence. There is little evidence that the policy is effective in increasing female turnout.

In this paper, we study the impact of separate-gender polling stations on voter turnout using administrative data from the 2018 general elections in Pakistan. We use the quasi-random assignment of voters to different types of polling stations within a 1-kilometer radius to derive causal estimates. Comparing female turnout in separate-gender polling stations to female turnout in mixed-gender polling stations within a polling location, we find that separate-gender polling stations reduce female turnout by 2 percentage points. A similar analysis for males shows that male turnout is reduced by 1 percentage point.

These results show that instead of solving gender-specific constraints that prevent women from voting, separate-gender polling stations present an additional barrier to voting for both women and men. Our results persist after controlling for the effects of resources and norms at an aggregated level, including the role of education, awareness, mobility norms, bargaining power and partner's characteristics.

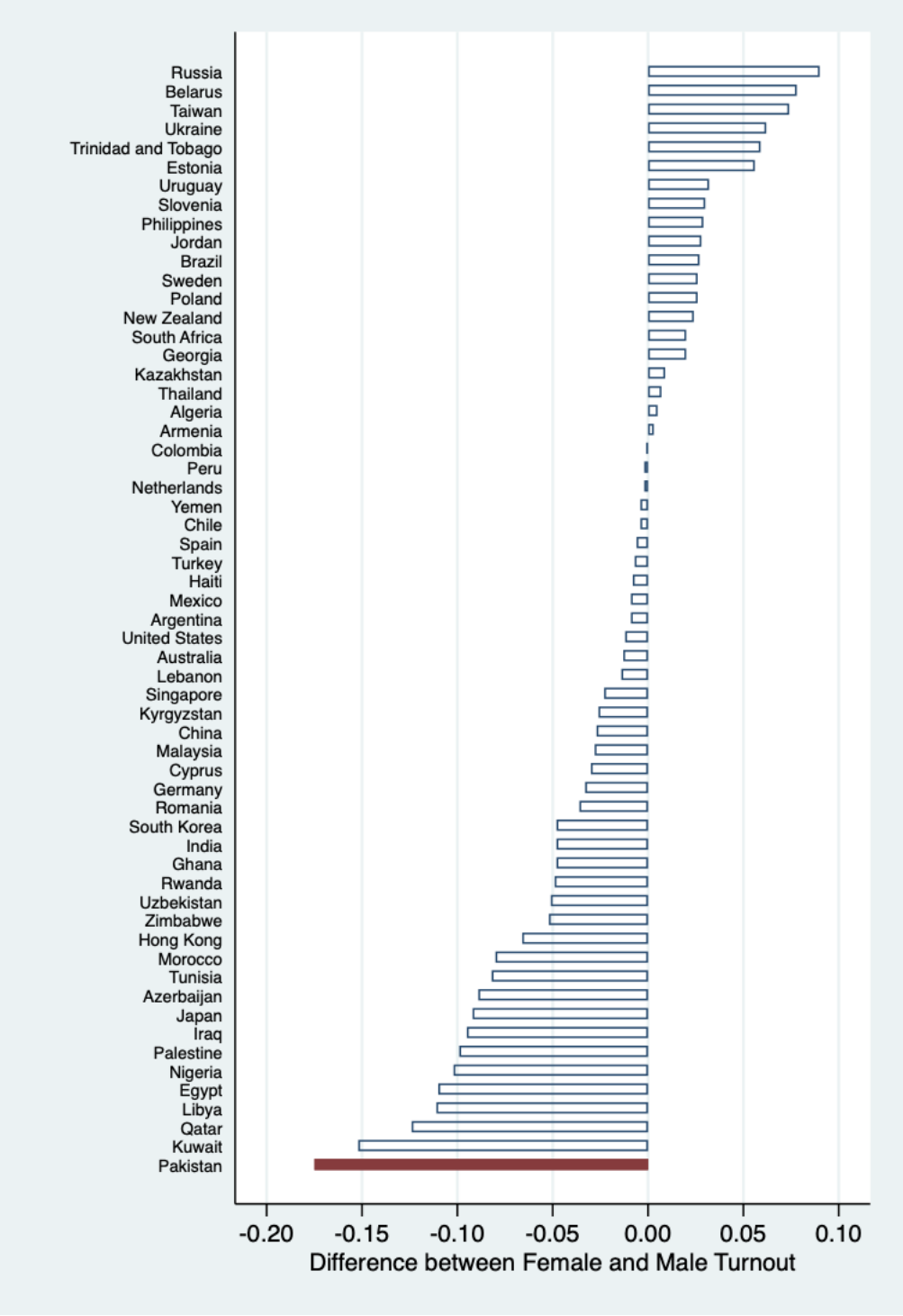
Our findings are important in understanding the constraints faced by women in voting – they suggest that the creation of separate-gender polling stations does not resolve the key constraint to low female turnout, and in fact, interacts with administrative, non-gendered constraints in a way that aggravates the turnout difference in separate-gender polling stations. Incorporating the effect of the interaction between gendered and non-gendered costs on female turnout could help better understand the constraints that prevent women and men from voting in separate-gender polling stations, such as a negative perception of separate-gender polling stations, or other norms that prevent women from voting alone. Understanding these barriers plays an important role in improving female turnout in developing countries.

[3] Governments in Afghanistan, Algeria, Argentina, Chile, Ecuador, Egypt, Jordan, Kuwait, Lebanon, Mozambique, Pakistan, Sri Lanka, Zanzibar, among others, have adopted the use of separate-gender polling locations, polling stations and priority queues (Electoral Knowledge Network 2013).

2. Gender Gap and Creation of Polling Stations

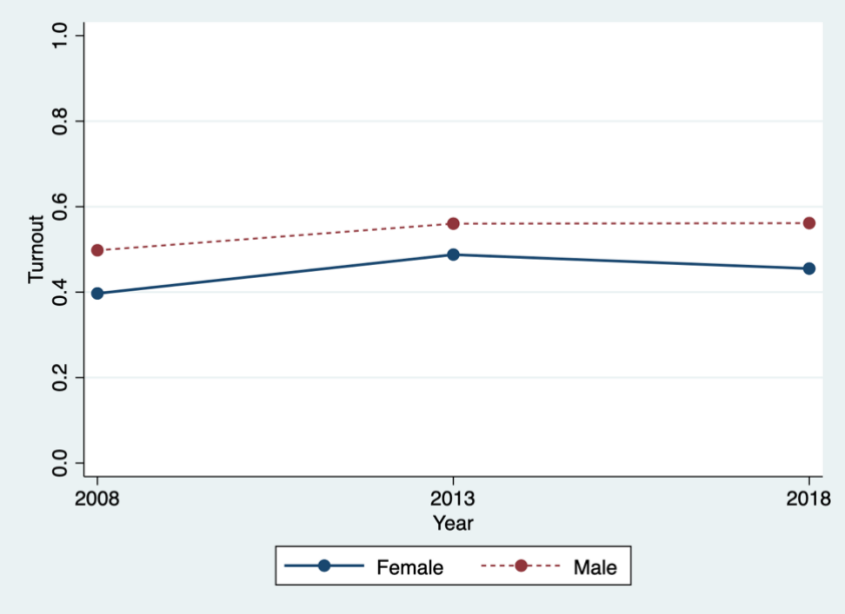
The gap between male and female turnout in Pakistan is one of the highest in the world, and parts of the country face enormous resistance from men to women's voting (Figure 1). The Election Commission of Pakistan (ECP) has implemented the policy of separate-gender polling stations since the 2008 elections in order to encourage women's voting. Figures 2 and 3 show that the gender turnout gap between males and females is large and persistent.

Figure 1: Pakistan has a Large Difference between Female and Male Turnout



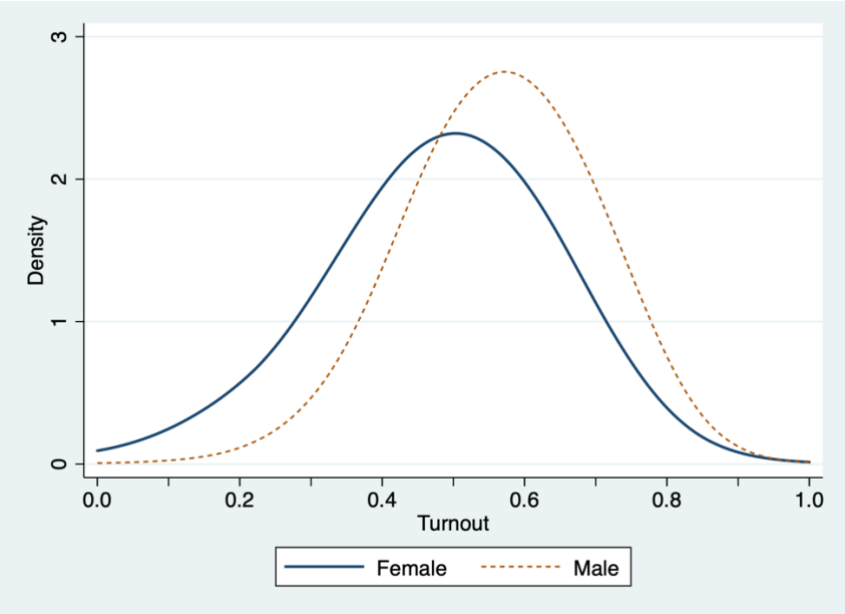
Note: The graph uses self-reported likelihood of voting. It depicts the difference between the share of female and males in the country who report that they always vote. *Source:* World Values Survey 2014.

Figure 2: Persistent Gender Turnout Gap over Time



Note: The figure shows female and male turnout in Pakistan's general elections in 2008, 2013 and 2018. Polling station level turnout, disaggregated by gender, was made available for the first time in the 2018 election. Turnout rates for all elections are calculated using only separate-gender polling stations for consistency. *Source:* Free and Fair Election Network 2009, 2013.

Figure 3: Higher Male Turnout in 2018 Election

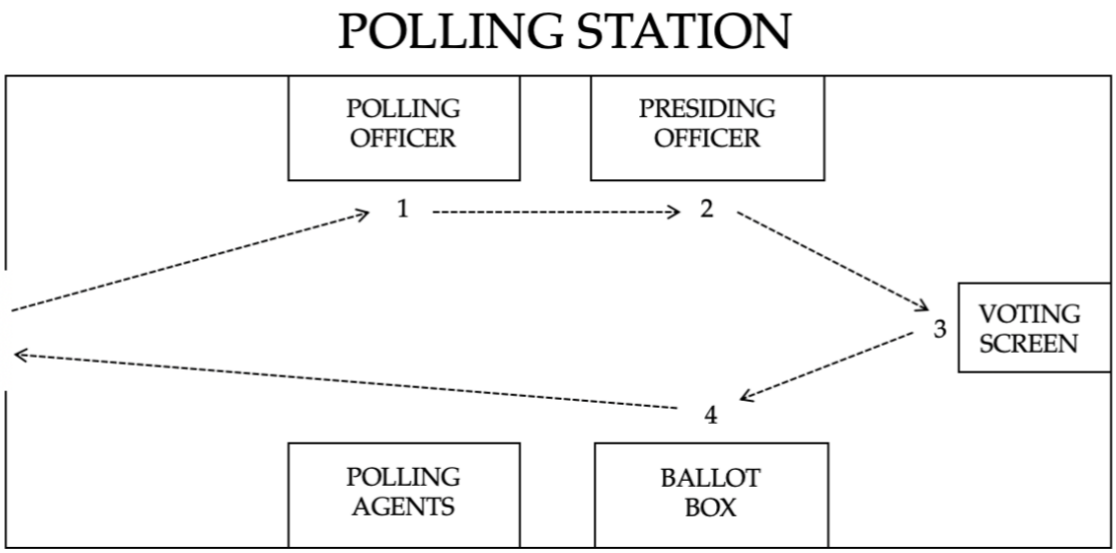


Note: This figure shows the distributions of female and male turnout at the polling station level in Pakistan's 2018 general elections.

The ECP creates three kinds of polling stations – Female-Only, Male-Only, and Combined. The Female-Only and Male-Only polling stations are gender-specific, while Combined polling stations are mixed-gender. A polling station can be situated in any Government building within the constituency, or when this is unavailable, in an improvised polling station on public property, or in a building owned by a private, registered educational institution. In practice, multiple polling stations are situated within a given polling location (for example, a school). The 2018 election dataset has 79,091 unique polling stations and 61,549 unique polling locations.

We refer to internal ECP documents that dictate the policy on creating polling stations. In preparing the polling scheme, the ECP allocates polling stations by census blocks. Here, four considerations are essential. First, where separate-gender polling stations are created, corresponding Male-Only and Female-Only polling stations are to be within the same polling location, as far as possible (Election Commission of Pakistan 2018). Where this is not possible, Male-Only polling stations might be placed in a different polling location than Female-Only polling stations. Second, where Combined polling stations are created, corresponding male and female voters of a census block are to be assigned to be same Combined polling station (Election Commission of Pakistan 2018). Third, as far as possible, the ECP ensures that the distance between the polling station and the voters assigned to it is less than 1 kilometre (Government of Pakistan 2017). This radius was adhered to in practice – a post-election assessment of polling stations found that 94 percent of surveyed individuals said that the distance between the polling stations and their place of residence was less than 1 kilometre (Free and Fair Election Network 2018b). Finally, no more than 1,200 voters can be assigned to any polling station (Government of Pakistan 2017).[4] In this context, the allocation of voters within a 1km radius to separate-gender and mixed-gender polling stations is quasi-random. The last census for Pakistan prior to the 2018 election was conducted in 1998, which means that little updated socio-economic information was available at the time of preparing the polling scheme.[5] The voting process once a voter enters a polling station are shown in Figure 4. Further details are given in the Appendix B.

Figure 4: Voting Process in the 2018 General Election



Note: 1. Individual enters polling station with original national identity card. Polling officer verifies identity and informs polling agents. 2. Presiding officer hands ballot paper to individual. 3. Individual puts stamp on ballot paper for the candidate she/he wishes to vote for behind the voting screen. 4. Individual places ballot paper with stamp inside ballot box. 5. Individual exits the polling station.

3. Data

In this paper, we use an administrative dataset with polling station-level electoral information for Pakistan's most recent general election conducted on 25 July 2018 (Sonnet 2019). There are a total of 79,091 unique polling stations in the data, divided into the three types of polling stations - Female-Only, Male-Only and Combined. 48% of the total 79,091 polling stations are mixed-gender, 25% are

[4] The final implementation of the policy in Pakistan is dictated by the availability of resources, such as female staff, etc.

[5] The allocation of voters to their polling stations is known in advance and cannot be changed.

Female-Only and 27% are Male-Only. Gender-disaggregated turnout data is available for all three polling station types.

The number of observations in the dataset is nearly twice the number of polling stations. This is because the election in 2018 was conducted at both the national and provincial levels. Individuals voted for both a National Assembly and a Provincial Assembly seat in their polling stations. As a result, polling stations are duplicated for National and Provincial Assembly seats.

We combine this data with the 2015 Pakistan Social and Living Standards Measurement (PSLM) and the 2017 Demographic and Health Survey (DHS) to analyze mechanisms. The 2015 PSLM and the 2017 DHS are representative at the district and national levels, respectively, and contain information on income, employment, education, amongst other development outcomes.[6]

4. Methodology and Results

To estimate the impact of polling station type on voter turnout, we compare the turnout of a particular gender in a separate-gender polling station to the turnout of the same gender in a mixed-gender polling station (Figure 5). Since there can be multiple polling stations within the same location or building, for example, a school, we control for the polling location, hence, comparing only separate-gender and mixed-gender polling stations within a polling location.[7] Following from the quasi-random assignment of voters within a 1km radius, being allocated to separate-gender or mixed-gender polling stations is exogenous within a polling location. This allows us to quantify the causal impact of separate-gender polling stations on voter turnout.

The empirical specification used to estimate this impact is given in Equation 1, which is our preferred specification. Here, $\text{FemaleTurnout}_{ijc}$ is the turnout of females in polling station *i*, polling location *j* and constituency *c*.[8] Female_{ijc} is a dummy variable that takes the value 1 if polling station *i* is a Female-Only polling station, and 0 if it is a Combined polling station. μ_c and γ_{ij} represent the constituency and location fixed effects, respectively.[9] In addition to this preferred specification, we also show results for a simple OLS that does not control for constituency and/or location. We conduct a similar analysis for males.

Equation 1: $\text{FemaleTurnout}_{ijc} = \beta_0 + \beta_1 \text{Female}_{ijc} + \mu_c + \gamma_{ij} + \varepsilon_{ijc}$

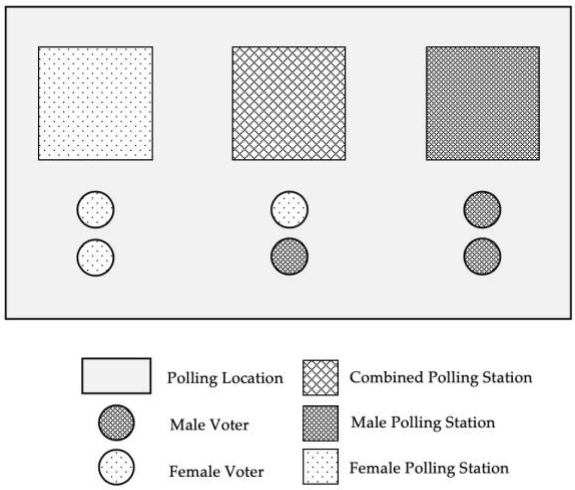
[6] The 2015 PSLM was conducted by the Pakistan Bureau of Statistics (PBS) which has made the micro-files for the survey publicly available on their website (www.pbs.gov.pk). The DHS is conducted by USAID in countries across the world.

[7] To identify the polling station location, we clean the names of all polling stations and then group polling stations with the same names together. Hence, we are able to control for location fixed effects. 34% of all polling stations are in locations with more than one polling station.

[8] Turnout is defined as the total number of votes cast on election day as a proportion of the total number of registered voters.

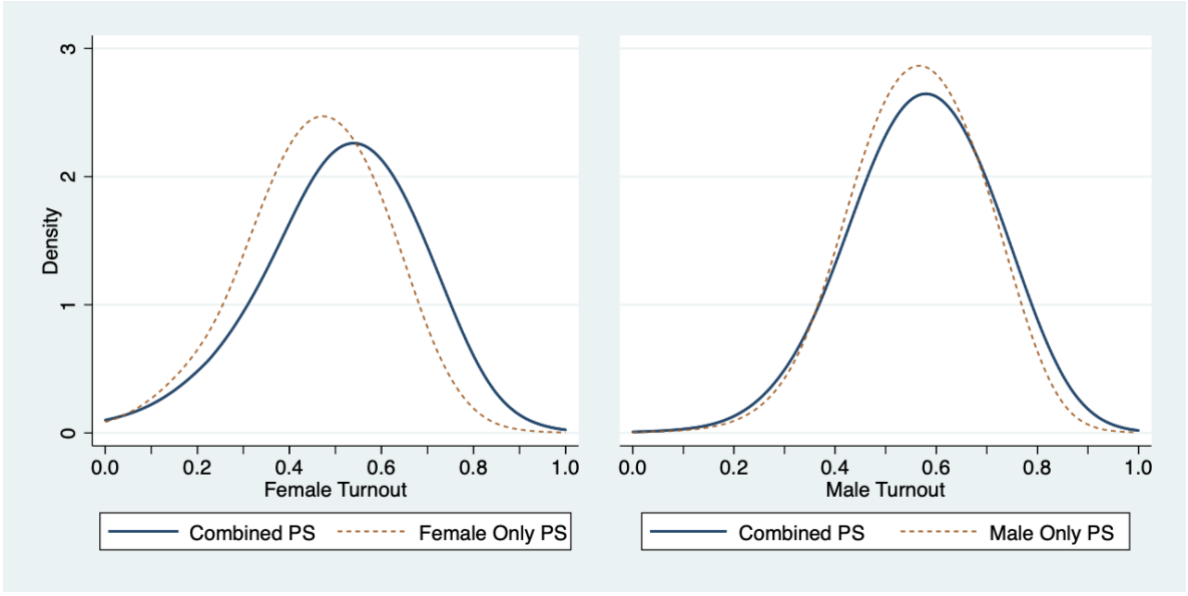
[9] In this context, provincial and national elections are held at the same time. Individuals may cast votes for either provincial or national, or both elections at their polling station. Our constituency fixed effects control for national and provincial seats separately.

Figure 5: Illustration of Main Empirical Specifications



Note: This figure illustrates our preferred empirical specification which controls for polling location. In Equation 1, we compare the female voter turnout in a Female-Only polling station with the female voter turnout in a Combined polling station within the *same polling location*. Similarly, we compare male voter turnout in a Male-Only polling station with male voter turnout in a Combined polling station within the *same polling location*.

Figure 6: Combined Polling Stations Have Higher Turnout than Separate-Gender Ones



Note: The graph shows the polling station-level distributions of turnout in mixed and separate-gender polling stations for females and males in Pakistan's 2018 general elections.

As can be seen from Column (3) in Table 1, which presents results from our preferred specification, having Female-Only polling stations reduces female turnout by 2 percentage points, on average, when compared to Combined polling stations. Having Male-Only polling stations reduces male turnout by 0.9 percentage points on average when compared to Combined polling stations. The results remain consistent across all three specifications presented.

Table 1: Lower Turnout in Separate-Gender Polling Stations

Panel A: Female Turnout in Female-Only vs Combined Polling Stations

Dep Var: Female Turnout	(1)	(2)	(3)
Female Only PS	-0.056***	-0.054***	-0.020***
	(0.001)	(0.001)	(0.006)
Observations	69303	69303	69303
Adjusted R^2	0.036	0.542	0.932
Constituency Fixed Effects	No	Yes	Yes
Location Fixed Effects	No	No	Yes

Panel B: Male Turnout in Male-Only vs Combined Polling Stations

Dep Var: Male Turnout	(1)	(2)	(3)
Male Only PS	-0.011***	-0.020***	-0.009**
	(0.001)	(0.001)	(0.004)
Observations	72370	72370	72370
Adjusted R^2	0.003	0.465	0.878
Constituency Fixed Effects	No	Yes	Yes
Location Fixed Effects	No	No	Yes

Note: This table measures the impact of having separate-gender polling stations on turnout. Panel A compares the female turnout in Female-Only polling stations with that in Combined polling stations. Panel B compares the male turnout in Male-Only polling stations with that in Combined polling stations. Column (1) conducts a simple OLS regression. Column (2) controls for constituency fixed effects. Column (3) controls for location fixed effects. Each location has one national assembly and one provincial assembly constituency. Standard errors are clustered at the location level and are reported in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

5. Mechanisms

To understand the mechanisms that could drive these results, we look at the role of various gendered and non-gendered factors that determine turnout and are identified in the literature. First, we test the role of factors that discourage women's voting, such as lack of access to resources or information (Burns et al. 2001; Giné and Mansuri 2018). We use measures of education and awareness to test the role of this factor. Second, we test the role of social norms that reinforce a 'gendered psyche' (Fox and Lawless 2010; Preece 2016; Gottlieb 2016; Cheema et. al 2019). We use district-level measures of female mobility-related norms, and female bargaining power to test this channel. Finally, we look at the role of voting costs, such as the ability for males and females of a household to be able to vote in the same polling location (Downs 1957; Brady and McNulty 2011).

We use 30 variables from the 2015 Pakistan Social and Living Standards Measurement survey (PSLM) and from the 2017 Demographic and Health Survey (DHS) to test the role of resources and norms. In the interest of conciseness and power, these variables are aggregated at the district level, and combined into seven indices, following Anderson (2008). The seven indices of interest are male and female education, male and female awareness, mobility, bargaining power, and husband's characteristics.[10] The variables used to construct the indices are shown in Table 2.

[10] The results for the individual variables are consistent with the indices.

Higher levels of education or awareness might mean that individuals are more politically involved or active. Politically inclined individuals, in turn, might be more likely to vote and, hence, less likely to be affected by the policy of separate polling stations. Lower female bargaining power, or less equitable mobility and gender norms could be important if the policy of separate-gender polling stations encourages females in conservative areas to vote, especially if the demand for separate-gender polling stations comes from the women in conservative areas themselves. Alternatively, it might have the opposite impact if the demand for this policy does not represent the constraints faced by the women. Finally, the characteristics of husbands might have an impact on women's constraints. For instance, more educated husbands might be associated with higher mobility of their wives. Detailed information on the definitions of the variables, and a description of the regression specifications used to test the mechanisms can be found in Appendices C and D respectively.

Table 2: Summary of Indices Used for Analysis

No.	Index	Types of Variables Used
1	Education	Female and male ability to read, school attendance, highest level of education attained
2	Awareness	Female and male consumption of newspapers, TV, radio, mobile and internet
3	Mobility	Norms against free mobility of women, including the need for permission to go to a doctor and acceptability of being hit for not taking permission
4	Bargaining Power	Decision-making power of women in different household decisions, including the use of contraception and household spending
5	Husband	Husband's education and labor force participation

Note: This table provides a brief summary of the different indices created to various mechanisms. The Education Index uses data from the Pakistan Social and Living Standards Measurement survey conducted in 2015. All other indices use data from the Demographic and Health Survey conducted in 2017. For further details about the indices, please refer to the Appendix C.

We also examine the costs of voting or mobility-related costs, by testing whether males and females being able to vote together drives the results. When mixed-gender polling stations are created, an entire census block with all its females and males is assigned to that polling station. However, when the ECP creates separate-gender polling stations, a census block is divided into two polling stations, one for females and one for males. While the corresponding female and male polling stations may be located in the same polling location, this is not always the case. Combining our data with information on the assignment of census blocks to polling stations shows that where blocks are allocated into gender-specific polling stations, only 32 percent of the corresponding Male-Only and Female-Only polling stations are in the same polling location.

Our results remain significant after controlling for the effects of resources, norms and voting together (Table 3). Using our preferred specification, we find that none of these variables explain the differential turnout of females or males in separate-gender versus mixed-gender polling stations.

Table 3: Results are Consistent after Including Role of Resources, Norms, Voting Together

Panel A: Female Turnout in Female-Only vs Combined Polling Stations

Dep Var: Female Turnout	(1)	(2)	(3)	(4)	(5)	(6)
Female Only PS	0.024***	0.020***	0.021***	0.020***	0.021***	0.021***
	(0.009)	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)
Female*Corresponding Male	0.005					
	(0.008)					
Female*Education Index		0.000				
		(0.009)				
Female*Awareness Index			0.005			
			(0.018)			
Female*Mobility Index				-0.001		
				(0.012)		
Female*Bargaining Power Index					-0.018	
					(0.021)	
Female*Husband Index						0.005
						(0.012)
Observations	69303	68293	44692	44692	44692	44692
Adjusted R^2	0.932	0.931	0.937	0.937	0.937	0.937
Constituency Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Location Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Male Turnout in Male-Only vs Combined Polling Stations

Dep Var: Male Turnout	(1)	(2)	(3)
Male Only PS	-0.011**	-0.010**	-0.008
	(0.005)	(0.005)	(0.005)
Male*Corresponding Female	0.003		
	(0.006)		
Male*Education Index		0.002	
		(0.006)	
Male*Awareness Index			0.004
			(0.011)
Observations	72370	71273	47026
Adjusted R^2	0.878	0.874	0.871
Constituency Fixed Effects	Yes	Yes	Yes
Location Fixed Effects	Yes	Yes	Yes

Note: This table tests for potential mechanisms. All specifications control for constituency and location fixed effects. Each location has one national assembly and one provincial assembly constituency. Standard errors are clustered at the location level and are reported in parentheses. For a detailed description of the indices, please refer to the Appendix C. * p<0.10, ** p<0.05, *** p<0.01.

6. Discussion

Together, these results suggest that separate-gender polling stations do not address the gender-based constraints to voting. To be effective, the policy of separate-gender polling stations would overcome the resource-, norms- or mobilization-based constraints faced by women that are highlighted in the literature. Having separate spaces for women to vote, could in theory, address the 'gendered psyche' by reducing men's resistance to female voting, or making women feel more comfortable in the public sphere. However, our analysis shows that separate-gender polling stations do not alleviate such constraints.

Instead, our results suggest that separate-gender polling stations increase non-gendered costs of voting for both females and males, and consequently, reduce turnout of both genders. Our analysis shows that the results are consistent across different levels of education, awareness, female bargaining power, and mobility norms in the country. This suggests that the results are driven by a feature of these polling stations in themselves. The administrative implementation of the policy of separate-gender polling stations could interact with the gendered component of the policy, and consequently, have large effects on turnout. While we can control for the effects of placement of separate-gender polling stations by looking at within-polling location differences, there might be other systematic differences in the manner this policy is implemented, in terms of staff or other resources made available to separate-gender polling stations, or in terms of the general or historical perceptions of such polling stations.

Our research opens up three avenues for future work. First, it is important to understand whose preferences the policy of separate-gender polling stations represents. It might be the case that this policy is being driven by demands from men or policymakers, rather than addressing the actual constraints faced by women.

Second, further research is required to understand the exact administrative features of separate-gender polling stations that decrease female and male turnout. Systematic differences in implementation could have a large impact on electoral outcomes (Neggers 2018). Future work could help uncover the mechanisms at play, which would help our understanding of the administrative determinants of voter turnout in developing countries.

Finally, future research could test the effectiveness of this policy in other contexts where it is implemented. It might be the case that the impact of this policy in conflict-affected areas such as Afghanistan and Yemen is different from its impact in places where the implementation is driven by concerns regarding women's safety or harassment by men, for example, or where it is driven by cultural and religious norms.

Understanding the impact of the policy of creating separate-gender polling stations on women's turnout behaviour is important for governments and electoral bodies around the world. It can help design policies that encourage the participation of women in the political arena and lead to better outcomes for all.

Bibliography

Anderson, Michael L. 2008. 'Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects'. *Journal of the American Statistical Association* 103 (484): 1481–95.

Brady, Henry E., and John E. McNulty. 2011. 'Turning Out to Vote: The Costs of Finding and Getting to the Polling Place'. *American Political Science Review* 105 (1): 115–34. https://doi.org/10.1017/S0003055410000596.

Burns, Nancy, Kay Lehman Schlozman, and Sidney Verba. 2001. *The Private Roots of Public Action: Gender, Equality, and Political Participation*. Cambridge, MA: Harvard University Press. https://ezproxy-prd.bodleian.ox.ac.uk/login?url=http://ebookcentral.proquest.com/lib/oxford/detail.action?docID=3300552.

Cheema, Ali, Sarah Khan, Shandana Khan-Mohmand, and Asad Liaqat. 2019. 'Canvassing the Gatekeepers: A Field Experiment to Increase Women's Electoral Turnout in Pakistan'. *Working Paper*.

Chhibber, Pradeep. 2002. 'Why Are Some Women Politically Active? The Household, Public Space, and Political Participation in India'. *International Journal of Comparative Sociology* 43 (3–5): 409–29. https://doi.org/10.1177/002071520204300310.

Downs, Anthony. 1957. 'An Economic Theory of Political Action in a Democracy'. *Journal of Political Economy* 65 (2): 135–50.

Election Commission of Pakistan. 2018. 'Preparation of Polling Scheme for General Elections - 2018 (Order No. F. 7(1)/2018 - Cord)'.

Electoral Knowledge Network. 2013. 'Systems with Separate Polling Stations for Men and Women'. Ace Project. 2013. http://aceproject.org/electoral-advice/archive/questions/replies/186593731.

Fox, Richard L., and Jennifer L. Lawless. 2010. 'If Only They'd Ask: Gender, Recruitment, and Political Ambition'. *The Journal of Politics* 72 (2): 310–326. https://doi.org/10.1017/S0022381609990752.

Free and Fair Election Network. 2009. 'Pakistan General Elections 2008: Election Observation Summary and Recommendation for Electoral Reforms'. Islamabad, Pakistan. https://fafen.org/election-observation-summary-and-recommendation-for-electoral-reform/.

———. 2013. 'General Election 2013 - FAFEN Observation'. Islamabad, Pakistan. https://fafen.org/wp-content/uploads/2014/12/Key-Findings-May13.pdf.

———. 2018a. 'Analysis of Voter Turnout in GE-2018'. Islamabad, Pakistan. https://fafen.org/wp-content/uploads/2018/08/FAFEN%e2%80%99S-Analysis-of-Voter-Turnout-in-GE-2018.pdf.

———. 2018b. 'General Election 2018 Polling Stations Assessment Report'. Islamabad, Pakistan.

Giné, Xavier, and Ghazala Mansuri. 2018. 'Together We Will: Experimental Evidence on Female Voting Behavior in Pakistan'. *American Economic Journal: Applied Economics* 10 (1): 207–35. https://doi.org/10.1257/app.20130480.

Gottlieb, Jessica. 2016. 'Why Might Information Exacerbate the Gender Gap in Civic Participation? Evidence from Mali'. *World Development* 86: 95–110. https://doi.org/10.1016/j.worlddev.2016.05.010.

Government of Pakistan. 2017. *Elections Act*.

Goyal, Tanushree. 2020. 'How Women Mobilize Women Into Politics: A Natural Experiment in India'. *SSRN Electronic Journal*. http://dx.doi.org/10.2139/ssrn.3583693.

ICF. 2018. 'Demographic and Health Surveys Standard Recode Manual for DHS7'. The Demographic and Health Surveys Program. Rockville, Maryland, USA. https://dhsprogram.com/pubs/pdf/DHSG4/Recode7_DHS_10Sep2018_DHSG4.pdf.

Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin, and B. Puranen. 2014. 'World Values Survey: Round Six - Country-Pooled Datafile'. Version: http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp.

Iyer, Lakshmi, and Anandi Mani. 2019. 'The Road Not Taken: Gender Gaps along Paths to Political Power'. *World Development* 119: 68–80. https://doi.org/10.1016/j.worlddev.2019.03.004.

Kadt, Daniel de. 2017. 'Bringing the Polls to the People: How Electoral Access Encourages Turnout But Exacerbates Political Inequality'. SSRN 2922125. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.2922125.

Khan, Sarah. 2017. 'What Women Want: Gender Gaps in Political Preferences'. In *Symposium: Women/Gender and Comparative Politics. CP: Newsletter of the Comparative Politics Organized Section of the American Political Science Association.*, edited by Matt Golder and Sona Golder, 27(1):42–49. https://www.khansarah.com/uploads/2/6/3/8/26387631/skhan_cpnewsletter.pdf.

Neggers, Yusuf. 2018. 'Enfranchising Your Own? Experimental Evidence on Bureaucrat Diversity and Election Bias in India'. *American Economic Review* 108 (6): 1288–1321. https://doi.org/10.1257/aer.20170404.

Pakistan Bureau of Statistics. 2016. 'Pakistan Social And Living Standards Measurement Survey (PSLM) 2014-15: Provincial/District Dataset'. Islamabad, Pakistan. http://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement-survey-pslm-2014-15-provincial-district.

Parthasarathy, Ramya, Vijayendra Rao, and Nethra Palaniswamy. 2017. 'Deliberative Inequality: A Text-As-Data Study Of Tamil Nadu's Village Assemblies'. Policy Research Working Papers 8119. The World Bank. http://hdl.handle.net/10986/27621.

Preece, Jessica Robinson. 2016. 'Mind the Gender Gap: An Experiment on the Influence of Self-Efficacy on Political Interest' 12 (1): 198–217. https://doi.org/10.1017/S1743923X15000628.

Prillaman, Soledad Artiz. 2017. 'Strength in Numbers: How Women's Groups Close India's Political Gender Gap'. *Working Paper*, 71.

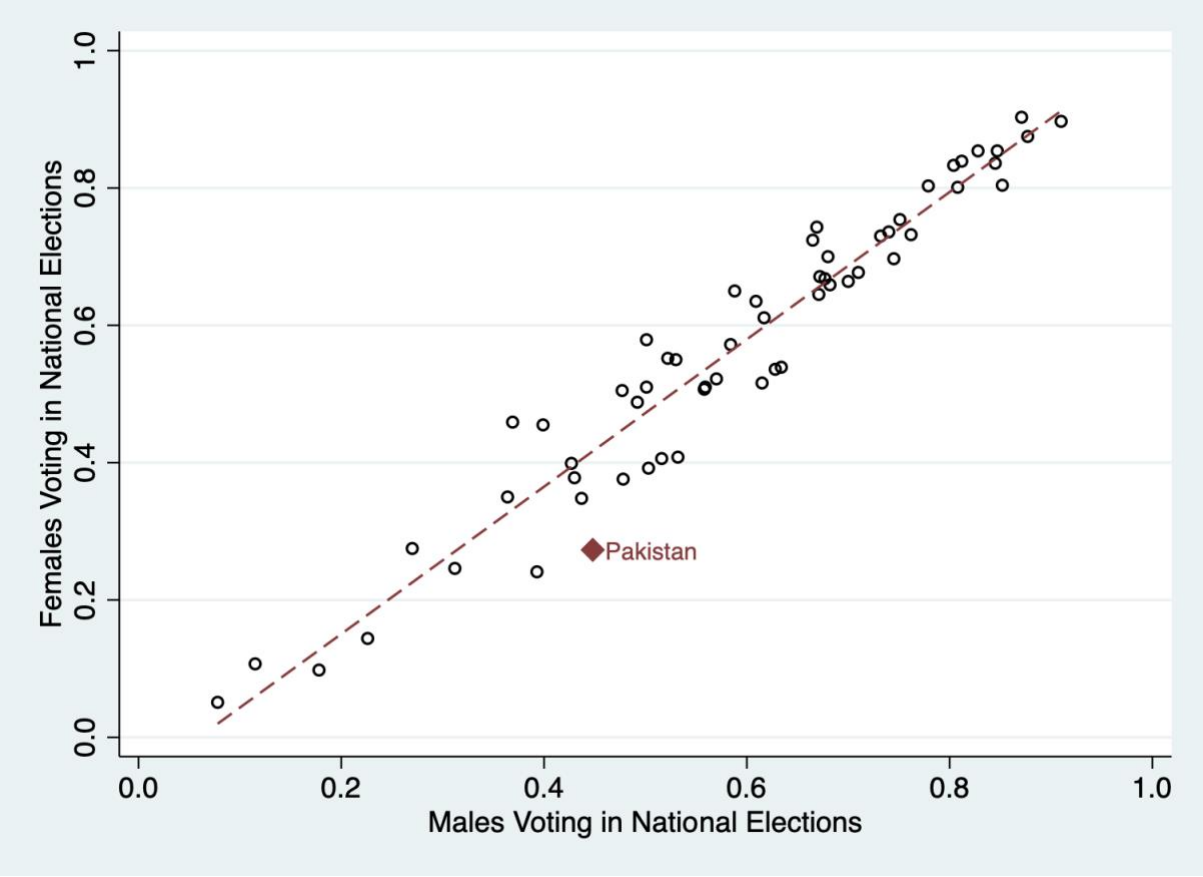
Sonnet, Luke. 2019. '2018 Pakistani General Election Polling Station Data'. https://doi.org/10.17605/OSF.IO/MTSND.

UN Women, and United Nations Development Programme. 2015. 'Inclusive Electoral Processes: A Guide for Electoral Management Bodies on Promoting Gender Equality and Women's Participation'.

Appendix A. Gender Turnout Gap

Figure A1 presents a scatter plot of the average share of females and males in the country who say they always vote. While males are always more likely to vote compared to females, Pakistan remains an outlier with one of the largest gender turnout gaps in the world.[11]

Figure A1: Males are More Likely to Vote in National Elections than Females



Note: The graph uses self-reported answers on the likelihood of voting. It shows the percentage of males and females who report that they always vote. The dashed line is the line of best fit. *Source*: World Values Survey, 2014

[11] While survey data such as the one used here runs the risk of over-reporting turnout, it allows us to make cross-country comparisons.

Appendix B. Voting Process

The voting process for the 2018 general election in Pakistan is given in the Elections Act 2017. On election day, voters are required to bring their original national identification card (CNIC) for identity verification.[12] No other form of identification (e.g. passport, drivers license) is accepted. Individuals can vote with their original CNIC even if it has expired. Women and men usually have separate waiting queues in Combined polling stations.

Upon entering the polling station, individuals are required to go to desk of the polling officer and present their CNIC. The polling officer will verify the details of the individual given on the CNIC with a list of registered voters. The individual is required to show her/his face so that the polling officer can verify their identity. If the name of the individual is present in the voter list, then the polling officer will call out the name and the serial number of the voter in the voting list out loud so that the polling agents seated close by can hear this and keep a track of the voters on their list. Each candidate can assign two polling agents per polling station. The polling agents represent the candidates and act as a check on the administrative staff. Then the polling officer will mark the right thumb of the individual with indelible ink which serves as a visual identifier of having voted. After this, the polling officer will ask the individual to place a thumb print on the voter list which is proof that the individual voted.

Once the polling officer has crossed off the individuals name from the voter list, the individual will then move towards the adjacent desk where the assistant presiding officer will hand over the ballot paper after taking a thumb print as receipt, and stamping the back of the ballot paper.[13] The assistant presiding officer will give the individual a stamp and keep her/his CNIC. Then the individual goes behind the voting screen to mark a stamp on the candidate that the individual wants to vote for. After this, the individual will return the stamp to the presiding officer, collect the CNIC, and put the voting ballot paper in the ballot box.[14]

[12] Copies of the CNIC are cannot be used for identity verification.
[13] The are two assistant presiding officers, one for the national assembly seat and one for the provincial assembly seat. Both hand over separate ballot papers for both seats to the individual.
[14] There are two ballot boxes, one for the national assembly and one for the provincial assembly.

Appendix C. Index Definitions and Descriptions

Female Indices

Education Index: Education could be an important mechanism that could help explain the main results. To test this channel, we created an Education Index using three education-related variables from the 2015 Pakistan Social and Living Standards Measurement survey (PSLM), namely, $Read_d$, $Attend_d$ and $Level_d$. $Read_d$ is the percentage of women in district *d* who know how to read, $Attend_d$ is the percentage of women in district *d* who have attended school and $Level_d$ is the average highest grade/level of education for women in district *d*. These three variables are used to create the Education Index for district *d* and combined with the administrative data of the 2018 election results.

Awareness Index: We create an Awareness Index using six variables from the 2017 Demographic and Health Survey, namely, $News_d$, $Radio_d$, TV_d, $Mobile_d$, $Internet_d$ and $InternetUsage_d$. $News_d$ is the percentage of women who read the news at least once a week in district *d*. $Radio_d$ is the percentage of women who listen to the radio at least once a week, TV_d is the percentage of women who watch TV at least once a week, $Mobile_d$ is the percentage of women who own a mobile phone, $Internet_d$ is the percentage of women who have used the internet at least once in a year and $InternetUsage_d$ is the percentage of women who have used the internet at least once in the last week. These six variables are used to create the Awareness Index for district *d* and combined with the administrative data of the 2018 election results.

Mobility Index: To test how female mobility and the norms around female mobility might explain the main results, we create a Mobility Index. For this purpose, we extract three mobility-related variables from the 2017 Demographic and Health Survey for Pakistan, namely, $Permission_d$, $Beating_d$ and $Alone_d$. $Permission_d$ is the percentage of married women in district *d* who report that getting permission from their partners to go to the doctor will be a problem. $Beating_d$ is the percentage of women in district *d* who believe that it is okay for their partner/husbands to hit them if they go outside without getting permission from their partner/husband. $Alone_d$ is the percentage of women in district *d* who report that wanting to go alone to the doctor would be a big issue. These three variables are used to create the Mobility Index for district *d* and combined with the administrative data of the 2018 election results.

Bargaining Power Index: We create the Bargaining Power Index by using seven variables from the 2017 Demographic and Health survey. $HusDecidesCont_d$ is the percentage of women who's husbands exclusively decide the use of contraceptives in district *d*, as a proxy for decision-making within the household. $HusDecidesNoCont_d$ is the percentage of women who report that their husbands exclusively decide not to use contraceptives, $OthersDecideHealth_d$ is the percentage of women who do not have a role in the decision about their own health, $OthersDecidePurchase_d$ is the percentage of women who do not have a role in making the decision about household purchases, $OthersDecideVisit_d$ is the percentage of women who do not have a role in making the decision about visiting relatives and $HusbandMoney_d$ is the percentage of women who have no role in making the decision about the way their husband's money is spent. $Worked_d$ is the percentage of women who did not work in the last 12 months. These seven variables are used to create the Bargaining Power Index for district *d* and combined with the administrative data of the 2018 election results.

Husband Index: We test the channel of husband's characteristics to see if it might help explain the main results for females. We test this channel by creating a Husband Index using two variables from the 2017 Demographic and Health survey, namely, $HusbandEdu_d$ and $HusbandWork_d$. $HusbandEdu_d$ is the average highest level of husband's education in district *d*. $HusbandWork_d$ is average percentage

of husbands who worked in the last 12 months. These two variables are used to create the Husband Index for district *d* and combined with the administrative data of the 2018 election results.

Male Indices

Education Index: Similar to females, we also create an Education Index for males to test for underlying mechanisms. The Education Index for males uses three education-related variables from the 2015 Pakistan Social and Living Standards Measurement survey (PSLM), namely, $Read_d$, $Attend_d$ and $Level_d$. $Read_d$ is the percentage of men in district *d* who know how to read, $Attend_d$ is the percentage of men in district *d* who have attended school and $Level_d$ is the average highest grade/level of education for men in district *d*. These three variables are used to create the Education Index for district *d* and combined with the administrative data of the 2018 election results.

Awareness Index: We create an Awareness Index for males to test the awareness channel. The index uses six variable from the 2017 Demographic and Health Survey, namely, $News_d$, $Radio_d$, TV_d, $Mobile_d$, $Internet_d$ and $InternetUsage_d$. $News_d$ is the percentage of men who read the news at least once a week in district *d*. $Radio_d$ is the percentage of men who listen to the radio at least once a week, TV_d is the percentage of men who watch TV at least once a week, $Mobile_d$ is the percentage of men who own a mobile phone, $Internet_d$ is the percentage of men who have used the internet at least once in a year and $InternetUsage_d$ is the percentage of men who have used the internet at least once in the last week. These six variables are used to create the Awareness Index for district *d* and combined with the administrative data of the 2018 election results.

Appendix D. Regression Specifications for Mechanisms

We test the role of various indices in explaining the results by running the empirical specification in Equation D1. Here, $FemaleTurnout_{ijcd}$ is the female turnout in polling station *i*, polling location *j*, constituency *c* and district *d*. $Index_d$ represents the district level value of the index variable explained above. We run a similar analysis for males.

Equation D1: $FemaleTurnout_{ijcd} = \beta_0 + \beta_1 Female_{ijcd} + \beta_2 Female_{ijcd} Index_d + \mu_c + \gamma_{ij} + \varepsilon_{ijcd}$

We test the role of mobility-related characteristics by computing the variable $CorrespMale_{ij}$, which tells us the share of all block codes in the polling station that are assigned to the same polling location for males. The coefficient on the interaction term $Female_{ij}$*$CorrespMale_{ij}$ tells us whether the difference in female turnout in Combined and Female-Only polling stations is different when corresponding Male-Only polling stations are in the same polling location. We run a similar analysis for males.

Equation D2: $FemaleTurnout_{ijc} = \beta_0 + \beta_1 Female_{ijc} + \beta_2 Female_{ijc} CorrespMale_{ij} + \mu_c + \gamma_{ij} + \varepsilon_{ijc}$

Appendix E. Data

A summary of the different sources of data used in this paper and their use is given in Table E1.

Table E1: Data Sources Used for Analysis

No.	Source	Description	Use
1	Administrative Election Results Data (2018)	Dataset with the 2018 election results at the polling station level	Produce the main results of the paper showing the impact of separate gender polling stations on turnout, explore mechanisms
2	Pakistan Social and Living Standards Measurement (2015)	Survey representative at the national and district level with various development outcomes, conducted by the Pakistan Bureau of Statistics (PBS)	Analyze various mechanisms
3	Demographic and Health Survey (2017)	Nationally representative survey with various development outcomes, conducted by USAID	Analyze various mechanisms

Note: The table presents a summary of different datasets that are used for the analysis conducted in this paper. It provides a brief description of the datasets and their specific use in the analysis.

Appendix F. Polling Station Descriptives

Table F1: Distribution of Polling Station Types

Polling Station Type	Frequency	Share
Combined	38,009	48%
Female-Only	19,424	25%
Male-Only	21,081	27%
Unknown	577	1%
Total	**79,091**	**100%**

Note: The table presents the share of Male-Only, Female-Only and Combined polling stations in the 2018 election dataset. There are a total of 79,091 polling stations in the dataset with less than 1% observations that do not have information about the polling station type.

Table F2: Distribution of Polling Stations by Polling Location

Description	Number of Polling Stations	Share
1 Polling Stations per Location	50,399	67%
2 Polling Stations per Location	11,149	15%
3+ Polling Stations per Location	14,140	19%

Note: The table presents the distribution of polling stations with shared locations for the 2018 General Election conducted in Pakistan. It uses the administrative election results data at the polling station level that is used for the main analysis in this paper.

Table F3: Share of Different Types of Polling Stations by Province

Province	Male-Only	Female-Only	Combined	Observations
Balochistan	30%	25%	45%	8,338
FATA	24%	19%	57%	1,160
Federal Capital	46%	45%	9%	570
KP	34%	29%	37%	22,906
Punjab	27%	25%	48%	87,932
Sindh	22%	20%	58%	34,550
Total				**155,456**

Note: The table presents the share of Male-Only, Female-Only and Combined polling stations in the 2018 election dataset by province. It also shows the total observations per province. The total number of observations with details about the polling station type across all provinces are 155,456. There are 1,150 observations that do not have details about the polling station type, and the total number of observations in the dataset is 156,606.