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Roadblocks Remain: Constraints to Women's Political Participation in Pakistan

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Abstract

How can governments encourage political participation by all? In this study, we ask why certain groups are less likely to vote solely based on where they are assigned to vote and argue that mobility plays an important role. We focus on Pakistan, the world's sixth-most populous country. Despite instituting reforms like single-gender polling stations, Pakistan is among the lowest-ranked countries for women's political participation. This paper uses 2018 polling station data to show that mixed-gender polling stations *increase* women's turnout. We also present descriptive findings to show that chance assignments to certain polling stations make women, but not men, more likely to turn out. We then use a survey experiment to test one possible explanation—mobility. Constraints to mobility have been shown to negatively impact women's educational and labor force choices, but their impact on women's political participation has not been directly tested. We find that when women's mobility is constrained by a lack of male accompaniment or they expect to travel along a predominantly male route, their likelihood to turn out decreases. We also find that women are more likely to vote in areas familiar to them (i.e., primary schools where they drop their children and girls' schools they attended). Our study implies that strategies to increase women's political participation in developing democracies should take the role of women's mobility seriously.

Keywords: Political participation, voter turnout, gender, mobility, Pakistan

1 Introduction

Free and fair elections imply that all citizens should have an equal opportunity to cast a ballot. However, this is often not the case. In advanced industrial democracies such as the United States, policies in the past and present are known to suppress racial minority votes (Hajnal et al., 2017; Epperly et al., 2020). In developing democracies such as Pakistan, discriminatory practices often suppress religious minority votes (Uddin, 2017). So how can governments encourage political participation by all groups?

Our study focuses on the case of Pakistan, the sixth-most populous country in the world. Despite top-down reforms like instituting gender quotas within parties and creating single-gender polling stations, the country still has one of the largest gender gaps in voter turnout. Scholarly work on women's political participation in South Asia underscores the importance of household autonomy, descriptive representation, networks, and norms in driving women's turnout (Chhibber, 2002; Barnes and Burchard, 2013; Prillaman, 2021; Brule and Gaikwad, 2021). We focus on a more short-term, election-day determinant: a lack of mobility. By mobility, we refer to the freedom and ease of movement outside the home.

For women in Pakistan and worldwide, freedom and ease of movement can be constrained by issues related to safety, normative environments, monetary resources, and a lack of time. In fact, prior work has shown that mobility can heavily shape women's everyday lives. For instance, we know that a lack of mobility can limit women's choices in job training, the labor force, and education (Muralidharan and Prakash, 2017; Cheema et al., 2020; Borker, 2021; Menzel and Woodruff, 2021; Junaid et al., 2020). There is ample reason to believe these issues operate in our study site—the Punjab province of Pakistan—and disproportionately affect women. For example, a recent audit on public transportation in Lahore (Punjab), Pakistan's second-largest city, shows that 90% of female bus riders have experienced sexual harassment on their commutes (UN Women, 2018).

Our study, however, investigates electoral participation. Voting in elections differs from outcomes related to activities women might do each day (e.g., going to school or work) because elections happen infrequently, giving individuals and political elites time to mobilize and arrange transportation to ensure high turnout rates among women (Goyal, 2020). Households may also vote as a group, so women's travel plans on election day may not be sensitive to ordinary limitations. That is not to say that mobility does not affect turnout. Literature from as far away as American politics suggests that

those who have trouble getting to the polling station are simply less likely to vote (Brady and McNulty, 2011). In Pakistan's context, Giné and Mansuri (2018) posit that personal safety concerns (a key element of mobility) on election day may matter more for women than for men, leading to disproportionately fewer women voting. This implies that a lack of mobility can constrain women's engagement in the public sphere even during one-off, salient events.

We employ a mixed-methods approach to address whether and how mobility can impact women's willingness to participate in politics. We use data from the 2018 national elections in Pakistan to find that women are more likely to turn out when assigned to mixed-gender polling stations. We also find that women are more likely to vote if their polling station is a girls' school or a boys' primary school. These same effects are attenuated or absent for men. To explain our results, we use interviews to design an original conjoint experiment in Punjab, Pakistan. In the conjoint experiment, we present respondents with a hypothetical scenario of their election-day experience and assess their likelihood of making the trip to vote under these circumstances. We vary several elements that might constrain mobility, including whether women are accompanied on the journey to the station, the gender usage of the street on the way to the station, wait time in line, and access to childcare at the polling station. Our analysis of the conjoint suggests that mobility impacts women's voting-day calculus, as they are swayed from their decision to vote if they need to go alone or risk street harassment. We do not find evidence in the conjoint for women changing their decision to vote based on childcare availability or wait times.

This paper contributes to three distinct sets of literature. First, we contribute to a body of work seeking to explain why women's political participation in certain areas of the world continues to lag behind men's. As a supplement to this work, we note that in-person voting favors those who face fewer mobility limitations outside the home. Our paper shows that mobility can determine women's participation on election day itself. This departs from longer-term processes such as the effects of network-building, cultural norms, income generation, and labor force participation on women's political participation (Chhibber, 2002; Prillaman, 2021; Brule and Gaikwad, 2021). Our paper also emphasizes the role that an institutional feature – mixed-gender polling stations – can have on women's turnout. This adds to previous work on how descriptive representation (another institutional feature) can alter women's participation (Barnes and Burchard, 2013). Second, we add to the literature on the impact of electoral laws, including registration deadlines, identification requirements, and polling hours and locations, on voter turnout (Hajnal et al., 2017; Burden et al., 2014). We show that

women are one group that can disproportionately suffer from particular reforms, not unlike people of color (Pettigrew, 2017) or youth in the United States. Finally, we build upon recent work in South Asia showing how safety-related mobility constraints disproportionately harm women's education and labor force outcomes (Muralidharan and Prakash, 2017; Cheema et al., 2020; Borker, 2021; Menzel and Woodruff, 2021; Junaid et al., 2020) by providing evidence for how these constraints also impact irregular, salient occurrences like national elections.

2 Women's Mobility and Political Participation

Research on turnout in developed democracies has found that face-to-face mobilization is the most effective method to increase turnout (Gerber and Green, 2000). Studies in the U.S. have also shown that factors such as the cost of transportation and difficulty finding polling stations factor into voters' calculus when deciding whether to turn out (e.g., Brady and McNulty 2011). More generally, other work has focused on the role that resources, such as time, money, and civic skills, can play as determinants of political participation (Brady et al., 1995).

Some of these explanatory variables have also been used to explain women's turnout, particularly when there is a large gap between rates of political participation across genders. For example, Goyal (2020) shows that face-to-face mobilization by female party workers can increase women's political participation. In Pakistan, field experiments emphasize the importance of mobilizing women to increase turnout. Giné and Mansuri (2018) show that during Pakistan's 2008 national election in Sindh, a voter awareness campaign targeting women increased women's turnout by 11 percentage points. However, Cheema et al. (2021) show that in Pakistan's 2018 election, a mobilization campaign targeting women in Lahore was not enough to increase women's turnout. In fact, women's turnout only increased when men in their households were targeted and made aware of the importance of women voting.

Some scholars have highlighted that resource disparity between men and women can explain lower rates of women's participation (e.g., Burns et al., 2001). Other work notes that resources and cultural norms can work together to shape women's civic engagement (Brule and Gaikwad, 2021). Explanations for women's political participation also emphasize the role of institutional features. For example, gender quotas in political leadership increase descriptive representation, which has been shown to increase women's participation as political citizens (Barnes and Burchard, 2013;

Parthasarathy et al., 2019). Additional institutional features such as decision rules can also encourage women to be more active in the public sphere (Karpowitz et al., 2012).

Research in South Asia has underscored the importance of the household in shaping women's political participation. For example, Chhibber (2002) argues that identities constructed outside the household are a prerequisite for women to run for office in India. Prillaman (2021) examines female political participation in India as a group-level phenomenon, finding evidence that increasing women's access to networks outside the household promotes attendance at local assembly meetings. In the case of Pakistan, Khan (2020a) shows that household inequality can prevent women from being substantively represented.

We add an additional significant explanation for women's participation: mobility. We focus on how limitations on the freedom and ease of movement, particularly those related to safety, can hamper women's political participation. Prior work indicates that these limitations are salient in situations involving transport. In Brazil, for example, women traveling in mixed-gender spaces on public transit experience harassment once a week (Kondylis et al., 2020). Studies have also documented that women forego income-generating activities due to mobility issues, such as physical distance from places of work and norms around where women can and cannot go. For example, a field experiment in Pakistan shows that women with a vocational training center outside their village are four times less likely to complete training than women with a center inside their village (Cheema et al., 2020). In Bangladesh, women are less willing than male factory workers to move between factories and suffer from wage stagnation as a result (Menzel and Woodruff, 2021).

In education, Borker (2021) finds evidence that women in Delhi attend lower-quality colleges than men in a pattern consistent with minimizing street harassment. The paper's results imply a tradeoff between travel safety and college quality. Similarly, Muralidharan and Prakash (2017) study the impact of a program in Bihar, India, that gave bicycles to secondary schoolgirls, arguing that the bicycles increased girls' enrollment by reducing the time and safety costs of attending school. There is evidence that mobility constraints operate similarly on women and girls' education in Pakistan (World Bank, 2005).

Women face limitations to mobility in their daily lives, particularly when traveling to and from school and work, and the Pakistani case is no exception. In Lahore, women report feeling unsafe simply walking in their neighborhood (Sajjad et al., 2018). One study finds that low-income women,

particularly those who travel unaccompanied, are more likely to experience sexual violence (Mumtaz and Salway, 2005). Women are also less likely to own private vehicles than men. Overall, women are less likely to leave home and experience harassment and violence when they do so (UN Women, 2018; Ahmad et al., 2020; Ahmed et al., 2019). This influences their decisions on mode of transport. Table 1, created using data from the Lahore Urban Transport Master Plan survey, shows that women in Lahore are more likely to choose transport based on safety and comfort concerns than men and are less likely to base their decisions on travel time or cost. This indicates that safety is a crucial limitation to their mobility.

Table 1: Main reason for choosing transport for typical trips (Lahore)

	Male	Female	Diff	*p*-value
Travel time	0.09	0.07	0.01	0.00
Comfort	0.18	0.19	-0.01	0.00
Convenience	0.41	0.41	0.004	0.23
Cost	0.05	0.04	0.01	0.00
Safety	0.10	0.11	-0.01	0.00
Had no other choice	0.18	0.18	-0.001	0.68

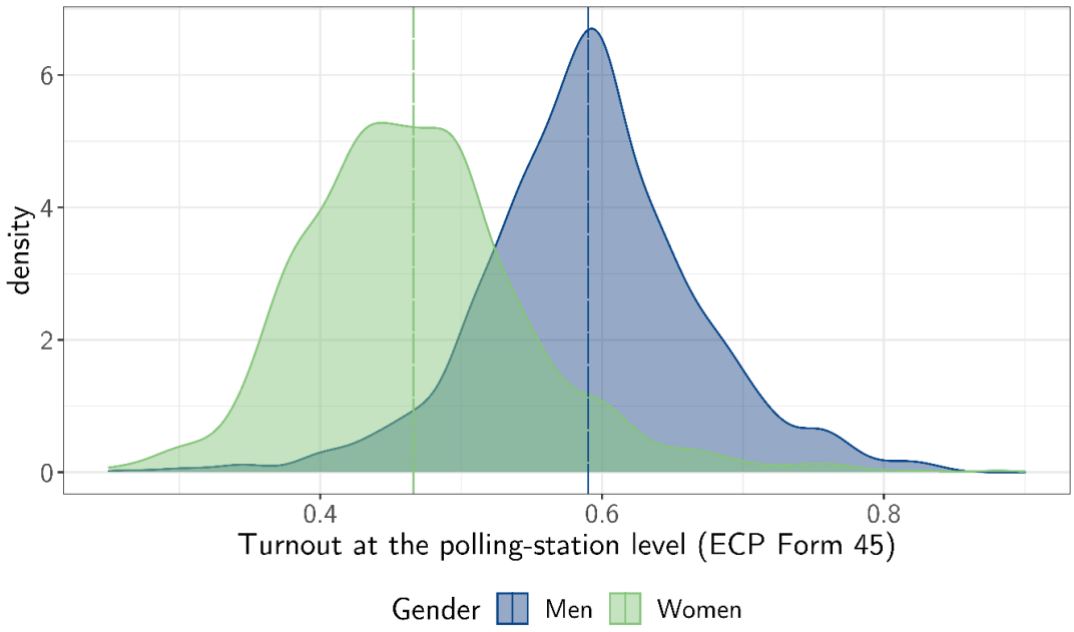
Note: Data from Lahore Urban Transport Master Plan (LUTMP) Household Interview Survey, conducted 2010–11 (JICA 2012). Achieves a sampling rate of 1% for 17,228 total households sampled by approaching every 100th house.

A United Nations (UN) report suggests that the "distance that people need to travel, the availability of public transport near the voting center and the safety of the local area are important considerations" in women's voting-day-calculus (UN Women, 2015, 75). However, prior scholarly work does not delineate how a lack of mobility might impact political participation, specifically turnout. While we know that mobility can play a role in the voting-day calculus in developed democracies (e.g., Brady and McNulty 2011), we focus on issues that are specific to women, particularly in developing democracies. Yet national elections might be a difficult area to make the case that women face mobility limitations. Elections are infrequent, high-salience events. Women and their families have time to make arrangements, and political parties may also help provide transport. Examining the extent to which these challenges alter turnout is, therefore, a "hard test" of the idea that women face mobility limitations to their civic participation. This joins other recent literature on acute, short-term determinants of political participation (Schaub, 2021).

3 Women's Turnout in Pakistan

Pakistan has had elections every five years since 2008. In these elections, voters cast ballots for both the National Assembly and the Provincial Assembly. Overall turnout rates for these elections have been 45%, 54%, and 50% in 2008, 2013, and 2018 respectively.[1]

Figure 1: The gender gap in national election turnout – Lahore, 2018



Women in Pakistan have faced "systemic exclusion" from electoral politics (Khan, 2020b, 163), despite attempts at reform by the Election Commission of Pakistan (ECP). For the 2018 election, the ECP made a variety of reforms to encourage women's participation. These included mandating that at least 5% of each political party's nominated candidates be women (Khan and Naqvi, 2020). The ECP also stated that election results would be nullified if women's turnout was below 10% (Dastageer et al., 2018). The 2018 election marked the first time that gender-disaggregated turnout statistics were released. Researchers have shown that the gender gap in turnout in Pakistan's 2018 election was 9.1%, or 11 million votes (Cheema et al., 2019). This number of votes is roughly equivalent to the entire population of Lahore, Pakistan's second-largest city. Within Lahore itself, Figure 1 shows that at the polling-station level, men's turnout on average was 59%, and women's was 46.6%.

[1] This statistic is calculated as number of votes cast divided by number of voters registered. The data are from the online database from International Institute for Democracy and Electoral Assistance (idea.int).

4 Election Analysis Design

We use a multimethod research design to study the effects of mobility on turnout. First, we use administrative data to show that certain polling station types disproportionately affect women's turnout by leveraging quasi-random assignment of voters to polling stations. We also provide novel descriptive evidence showing that women are more likely to vote in places they are likely familiar with, such as primary schools where they drop their children or girls' schools they may have attended. The same cannot be said for men. We subsequently provide interview evidence and use this evidence to design a survey experiment to test individual-level mechanisms for these effects.

4.1 Election Data and Measurement

We use gender-disaggregated turnout data at the polling station level for Pakistan's 2018 election (Sonnet, 2019). This dataset also lists various aspects of polling stations, such as the gender type of the polling station, voters registered at the polling station, the number of voting booths, and the location.

We assess how these polling station characteristics predict women's and men's turnout. First, we include whether the polling station is single or mixed gender. Pakistan's polling stations can serve male voters, female voters, or both. While polling stations can be mixed-gender, voting booths within these stations are always single-gender only. For example, a mixed-gender polling station might be a school with separate booths (classrooms) for women and men. This distinction is significant, and voters are assigned to polling stations conditional on being within a given neighborhood. Despite the intent of the single-gender polling station reform, a recent working paper found, using these same data, that women's turnout falls in women-only stations (Chattha and Lakhtakia, 2020). Women often rely on men for transport, as they are less likely to own or be able to operate private vehicles, so instituting single-gender polling stations could decrease women's turnout.

Another factor associated with mobility is familiarity with one's environment. In fact, a UN report on inclusive electoral practices states: "Women are more likely to vote if there is a voting center near the places that they frequent, such as the market, schools, or clinics" (UN Women, 2015, 75). Therefore, we include a binary variable equal to one for polling stations that women are more likely to have visited previously. These include girls' schools, women's colleges, mothers' health centers, and boys' primary schools (where women may drop their children). All other polling stations, typically men's colleges, local government offices, and hospitals, are coded as zero. Note here that if a polling station is a

women's center or school, it can be used as a mixed or single-gender polling station for either gender on election day. Therefore, girls' schools are not necessarily female-only polling stations.

Finally, wait times at polling stations can limit women's movement outside the home due to the gendered division of labor. As Cheema et al. (2021) note, election day is declared a national holiday, which gives those who work in the formal sector time to vote. However, for those (typically women) who engage in unpaid labor within the household, an election-day holiday does not provide them with more time and therefore limits their ability to leave the home. We proxy for how long a polling station's wait time will be by calculating the average number of female voters per booth within the polling station for female turnout and the average number of male voters per booth within the polling station for male turnout. This is possible because each polling station has multiple booths. We assume that more voters per booth on average translates to longer lines at the polling station.

4.2 Identification Strategy using Neighborhood Fixed Effects

We utilize neighborhood fixed effects per the identification strategy presented in Chattha and Lakhtakia (2020). The authors explain that voter assignment to a mixed or single-gender polling station within a specific 1km radius polling location (neighborhood) is quasi-random.[2] This means that the coefficients for mixed-gender buildings in the models can be interpreted as causal. Our models replicate the specification in Chattha and Lakhtakia (2020) for a specific subset of Pakistan (Punjab). We include constituency-fixed effects to hold constant particular features of electoral politics, such as candidate appeal. The neighborhood fixed effects will hold constant features such as road infrastructure that might impact the station's accessibility. We build on Chattha and Lakhtakia's (2020) model, adding coefficients to delve into which—if any—polling station characteristics are associated with marginal changes in women's turnout.

5 Results from Election Data

Table 2 shows the results of our analysis. The outcome variable is the proportion of women or men, respectively, that voted in the 2018 election, given the total registered to vote per polling station. In line with prior analyses, we show that when men and women can vote in the same building,

[2] We use polling station names to assign polling stations to a given location/neighborhood. This is the same strategy the authors of the original working paper use but, due to slightly different text data cleaning methods, we obtain different results. Specifically, we find about 65,000 unique polling locations in Pakistan while Chattha and Lakhtakia (2020) find about 69,000. This slight difference does not change that our replication yields the same main results as the original paper. In fact, when we run the same two models for all of Pakistan, we obtain the same point estimates.

women's turnout increases by two percentage points. Men's turnout is also higher when assigned to mixed-gender buildings, although the coefficient is smaller in magnitude at one percentage point.[3]

Both coefficients on mixed-gender buildings are statistically significant ($p < 0.001$). The two-percentage-point increase in women's turnout is also a substantial effect, given that the gender gap in turnout is nine percentage points across all of Pakistan. This magnitude implies that even if men's turnout stayed stagnant, a two-percentage-point increase in women's turnout would decrease the gender gap by over 20%.

Table 2: Turnout and polling station locations in Punjab

	Turnout (0-1)	
	Women	Men
Mixed-gender building	0.020***	0.009***
	(0.003)	(0.002)
Girls' school	0.011***	0.004
	(0.003)	(0.002)
Boys' primary school	0.012**	0.006
	(0.004)	(0.003)
Females per booth (100s)	−0.007***	
	(0.001)	
Males per booth (100s)		−0.007***
		(0.001)
Dep. var mean	0.550	0.600
Constituency FE	Yes	Yes
Location FE	Yes	Yes
Num. obs.	30853	31485

$***p < 0.001$; $**p < 0.01$; $*p < 0.05$

The following two rows (Girls' school and Boys' primary school) show how a building's usage outside of election day impacts turnout by gender. Men, who tend to be less constrained than women, do not tend to vote at different rates when assigned to either type of school. On the other hand, women show higher turnout rates in these potentially "familiar" settings. When voting in a girls' school of any level or a boys' primary school, women's turnout increases by over one percentage point. These associations are statistically significant at conventional levels ($p < 0.001$ and 0.01, respectively).

[3] These coefficients are statistically distinguishable from each other, and a future iteration of this paper will include an appendix table showing this.

Overall, polling station characteristics are differentially associated with turnout rates by gender. This has direct implications for whether elections reflect the preferences of all citizens. Quasi-random assignment to single-gender polling stations and unfamiliar locations can hinder the inclusion of women's voices in the electoral process. Specifically, when women cannot vote in the same building as their male family members, women's turnout increases by two percentage points. We see only half this decrease for men: same-gender stations only decrease men's turnout by one percentage point. Additionally, women's turnout is likely to be higher when they are more familiar with the area. The same cannot be said for men.

6 Experimental Design

While the above section provided a broad picture of how women's turnout may differ solely based on polling stations, we explore the mechanisms through which this may occur at the individual level. We use a conjoint experiment to test how a lack of mobility can influence women's voting-day calculus in Pakistan. This method allows us to manipulate perceptions of how easily and freely one can leave the home. A conjoint analysis can be an ethical and effective way to test whether safety issues limit mobility on election day. Women assess street safety in part through visual and audio cues (e.g., looking out from balconies), from family members who have already voted, news reports, and WhatsApp messages from neighbors. Furthermore, they are likely to learn their polling location shortly before voting and assess risks in real-time. Therefore, our informational treatment in the conjoint experiment approximates what respondents could experience on election day.

Our survey experiment presents four randomized attributes to respondents and asks about their likelihood of political participation under these scenarios. Instead of examining the effect of longer-run changes that can affect women's civic engagement, we focus on day-of factors that might impact the decision to turn out, such as the environment on the streets and at polling stations. That respondents can realistically obtain such information is supported by our qualitative interviews and post-conjoint debrief with respondents.

The conjoint experiment design allows us to simultaneously understand the effects of multiple (and potentially correlated) treatments (Hainmueller et al., 2014; Hainmueller and Hopkins, 2015). This design also may limit social desirability bias (Horiuchi et al., 2021), which is particularly important

when conducting a phone experiment where others in the household can hear.[4] Notably, conjoint experiments have been criticized for prioritizing theoretical interests and ignoring several contextual factors (Auerbach and Thachil, 2018). Therefore, both authors conducted interviews in Karachi[5] and Lahore[6] in 2018 and 2019 on the women's movement and civic engagement more broadly. We use this qualitative evidence to motivate our experimental treatment.

6.1 Motivating our Attribute Choices

Our attributes of choice are accompaniment during the voting trip, gender usage of the street, childcare availability, and wait time at the polling station. We discuss each in turn below.

Accompaniment

The first component of election-day mobility that we vary in the conjoint is accompaniment on the way to the polling station. Streets in Pakistan can be dangerous for women. Yet there is a widespread belief that there is safety in numbers—that accompaniment by one's brother or father-in-law, or even one's female friends, decreases the risk and reputational concerns. This is especially true among poorer women, whose unaccompanied movement outside of the home can be associated with a loss of prestige, as accompaniment is the more "prudent" course (Mumtaz and Salway, 2005). In our sample, one female respondent told us in no uncertain terms that her political participation would depend on accompaniment: "If my husband is not available to take me [to go vote], I would even prefer to go with some elderly woman, but I would never go alone."

This is a viewpoint shared and perpetuated by men. Reflecting on passing through election-day crowds of men going to vote, one man noted it "wouldn't make a difference to me." But, he added, "if women are alone, they should definitely not go vote." Leaving the home accompanied by brothers or fathers is not only an election-day phenomenon for women. Rather, it is common practice for brothers to drive their sisters to school, work, or friends' homes. The expectation of accompaniment means that women tend not to invest in their own forms of transport, like motorcycles, deepening their reliance

[4] Our results are robust to enumerator-noted observer effects. A future iteration of this paper will contain an appendix including robustness checks and a list of precautions we took to prevent backlash against survey respondents from household members listening in.

[5] Interviews in Karachi were conducted in June and July of 2018 by Natalya Rahman under Princeton University IRB Protocol 10634. Although Karachi is an entirely different city and context compared to Lahore, we believe that women face similar issues with mobility across both contexts.

[6] Interviews in Lahore were conducted May and July 2019 by Sarah Thompson under Stanford University IRB Protocol 53024.

on family. One young man told us that this expectation becomes "a burden on male family members."[7] The inconvenience runs both ways; one woman noted that she was committed to participating in national elections but can only do so "if someone from my family is available to take me."

Finally, we include accompaniment as an attribute given findings in prior literature. For example, Mohmand (2019) notes that voting is a collective activity in Punjab, and Prillaman (2021) and that participation is household-centered in rural India. In rural Sindh, Giné and Mansuri (2018) found that most female voters went to the polling station for the 2018 elections with female or male household members. This implies a variation in accompaniment when voting, which is aligned with our treatment.

Gender usage

Another attribute we use in our experiment is the gender usage of the street on the way to the polling station. This is a relevant factor in women's transport calculus, linked to perceptions of street safety and thus women's freedom and ease of movement (Borker, 2021). In our interviews, women discussed how men dominate public spaces, and how their presence can often be threatening. One woman, in particular, discussed[8] how consistently exhausting her commute is. She travels via bus, where the first and smaller section of the bus is supposed to be designated for women, and the rest (about 90%) is designated for men. However, in practice, this is not always the case:

> I don't get tired working at my job all day; the commute home is what really gets to me. It is complete *zalalat* (shameful). The bus driver often lets the men into the women's section, and they stand so close. In our own women's transport, they give us a tiny sliver of space, and they do this. Men come near us and bump into us, and no one does anything. I cling to the door and try to make myself scarce. Even on the bus, these dirty men ask why you are out so late and what kind of woman you are. They catcall, they ask you to come home with them.

Many women face similar experiences every day, and harassment is not confined to public transport. For example, one woman[9] we interviewed owned a beauty parlor in the community that she reaches

[7] Interview in Lahore, May 2019. Luckily for him, his mother had just purchased and learned how to drive her own motorized scooter, courtesy of our field partner CEIP: "I don't have to wait for anyone now. I'm independent."
[8] This interview was conducted in 2018 by Natalya Rahman in Karachi and the quote has been translated from Urdu and edited for clarity.
[9] This interview was conducted in Lahore by Sarah Thompson.

by walking. However, she limits her movement at night to only extremely necessary trips: "I'm not comfortable walking on the roads to my beauty parlor, but it's a necessity. Nights are worse. There is a lot of catcalling and hooting, and my daughter gets more."

Men are aware that harassment is a limitation to mobility. In our survey, enumerators asked open-ended questions about whether any men or "rowdy" or menacing men on the street would deter respondents and their families from going outside to vote. Several men stated that even they would not vote if rowdy men were on the street: "Why would I go vote? There is no need to take on unnecessary tension and face problems." Others, however, stated that if they were going to vote with women from the household, they would never walk on the street with these menacing men. The emphasis on women became starker when our enumerators asked male respondents how they would think about voting if the gender usage of the street were male-dominated. One man stated, "If there are only men on the street, women should not go to vote at all." Here, it is critical to note that these men do not have to be doing anything specific (such as catcalling) for both men and women to see them as a threat.

Gender usage of the street is, therefore, a critical element that can limit mobility. We note that gender usage could be taken as a signal of norms in addition to safety. For this reason, we explicitly mention both men and rowdy/catcalling men as different levels in our conjoint experiment.

Childcare

In Pakistan, women perform disproportionate amounts of domestic, unpaid labor. As such, they are restricted in their movements by needing to make arrangements for their children or taking them along with them. They also have less time to spend outside of the home in general due to these responsibilities.

Women in our sample report confirm that watching their young children while waiting in line can be onerous. Polling station childcare facilities, as discussed in a report on inclusive electoral practices (UN Women, 2015), could help mitigate these inconveniences. Yet, while some women we talked to expressed that providing childcare would be helpful, others had reservations. One woman thought a childcare scheme could backfire, with a risk of "kids getting kidnapped if there is no proper monitoring." She and several others thought it would be better to leave children with trusted family members at home. We include both childcare options in our conjoint, as well as a scenario where the respondent must take their children with them to vote.

Wait time

In interviews just after the 2018 election in Pakistan, many voters discussed how wait time at the polling station influenced their turnout. For example, one male voter told us:

> I would never have voted, but my brother went and told me it was quick,[10] and he got a free cup of coffee [for showing a local coffee store that he voted]. I thought, 'How bad could it be?' I ended up standing in line for two hours, unfortunately, but anyway.

One female voter, on the other hand, was impressed that voting took her just 20 minutes: "It was really fast because there were two lines per class [polling booth]." Another female voter commented on wait time, implying that the Election Commission of Pakistan (ECP) did not put enough effort into voting processes: "I think ECP needs to educate the voting staff. They did not seem very educated, and they came late at certain polling stations. The polling didn't start on time, and obviously, there were long lines. Those things had an impact." The voter continued, saying that despite logistical constraints, the people of Pakistan stood up for change in the election. Still, she noted keeping voters waiting affected morale and perhaps turnout for all.

It is important to note that wait times could substantially affect women's turnout. As Cheema et al. (2021) discuss, while making election day a national holiday affords formal sector workers (typically men) time to vote, it does not increase women's free time, and may even increase their domestic responsibilities. This motivates our choice to include expected wait time in the conjoint as a component of freedom of movement.

6.2 Survey Design

We embed our conjoint experiment in a phone survey. The full conjoint attributes and levels appear in Table 3. Attributes are presented in a random order generated by Qualtrics and vary for every scenario. Attribute levels are also randomly generated by Qualtrics, with an equal probability of being shown. During our piloting phase, we ensured that all 54 potential combinations of trip conditions were logical and did not cause confusion among respondents. We utilize a single-profile rather than a paired-profile conjoint to aid recall in a phone survey context.

[10] Note, here, that a voter received information about the ease of voting on the day of the election and this influenced his decision to turn out.

Table 3: Attributes in conjoint experiment

Attribute	Levels
Accompaniment	Alone With female (for women) / male (for men) friends from your community With brother/husband/father/father-in-law
Gender usage of streets	Mostly women and children seen along route Only men seen along route Catcalling men along route
Childcare	Someone at home has agreed to watch your children You will have to take your kids with you but the polling station has childcare You will have to take your kids with you and watch over them
Wait time in line	10 minutes 1 hour

After collecting demographic information, enumerators tell respondents that they are going to begin a hypothetical scenario. *"Imagine that you are going to the polls on election day. The polling station is a 10-minute walk away. Going to the polling station would involve..."* This explicitly controls the mode of transport (walking) and the time that the task would take (10 minutes). Doing so helped ensure that trip combinations were logical. Moreover, this also controls for potential confounders such as systematic differences in the perceived expense, logistical convenience, and safety of various modes of transport, as well as norms around the gendered usage of motorized vehicles. For example, one common refrain in our pre-survey interviews was that women driving motorcycles remains taboo in much of Pakistani society. However, this is the most common means of non-walking transportation for men. Because of this taboo, women told us they relied on more expensive forms of transport, like rickshaws. Our design, therefore, benefits from holding the mode of transportation constant.

It is important to note that most people in Lahore use a motorbike to go to polling stations. Confining our trip scenarios to walking, therefore, might limit the generalizability of results. Still, we believe that our treatment is generalizable for a few reasons. First, even if the majority of the trip to the polling station is via motorbike, walking can be an important component of the trip, like from a parking spot to the polling station door or within the polling station complex itself. Second, accompaniment matters regardless of the form of transport. Third, even when traveling via motorbike, there are several

opportunities for gender usage of streets to become salient for voters (e.g., stopping at intersections, parking on streets, or when driving at low speeds).

6.3 Outcome Measures

After the enumerator reads all four attribute levels of the scenario, respondents answer how likely they would be to turn out. This measure is intended to gauge respondents' real-world likelihood of political participation at the margin when, on election day itself, voters learn new information about their voting environment. It also complements the administrative data analysis by affording insight into the turnout decision-making process. We also ask women how likely it is that they would be *allowed* to go, and men how likely they are *to allow* their female family members to go vote.

After the experiment, we ask a variety of questions about voting experience, household decision-making, political knowledge, interest, efficacy, and networks.

6.4 Sample

The sample for our survey experiment comes from women who have at some point been affiliated with Community Support Concern Empowerment and Inclusion Programme (CEIP), a nonprofit microfinance organization based in Lahore. This nonprofit operates throughout Pakistan's Punjab province, creating programs to empower women and encourage development. It has a current pool of approximately 33,000 active clients, who are low-income women in Lahore, most of whom do not hold formal jobs and have not had any formal education. Leveraging the institutional trust it has established in the communities where it works, the nonprofit reaches more conservative families who otherwise would not allow their daughters and wives to interact with NGOs or researchers. Table A1 in the appendix provides selected descriptive statistics on the education levels, access to essential services, and assets of the population of nonprofit clients.

Our survey was fielded to 534 respondents (254 women and 280 men). We present summary statistics for our random sample of NGO clients in Table A2 in the appendix. The median age in our sample is 37 years, 97% of our sample is married, with a median of three children under the age of 16. About half of our sample has never attended school, is employed or self-employed, resides in the Lahore district, and conducted their interviews primarily in Urdu (rather than Punjabi).

As all of our field partner's clients are women, we randomize whether a phone number will be used for a male or female survey and assign same-sex enumerators before calling.[11] As many women in our sample do not own their own phones, the first person to answer the phone is likely to be a man. Speaking to the first person who answers the phone would bias our sample towards men, and we wished to avoid sample selection based on resistance toward allowing women to speak on the phone. Similarly, we employed same-sex enumerators to maximize the response rate, decrease the chance for domestic repercussions for our respondents, and minimize social desirability bias.

Inclusion of men in our sample

While our study focuses on women's turnout, we include men in our study for several reasons. First, voting in Pakistan is often a collective activity with several decision-makers in the community and the household involved (Mohmand, 2019). Second, women's turnout can often be a function of their male family members' decisions. In fact, Cheema et al. (2021) show that men had to be targeted in Pakistan's 2018 election to increase women's turnout. In households where men were targeted, they were more likely to provide logistical support to women on election day—specifically, facilitating their transport to the polling station, waiting for women outside the station, and sharing household chores so women had time to vote. Their turnout decision-making can affect the whole household. Therefore, men's opinions on women's turnout are relevant in this context.

6.5 Analysis

We utilize a single-rating conjoint analysis to understand how women in Pakistan approach the multidimensional decision of voting. Our unit of analysis is a rated voting scenario. We run the conjoint portion of the analysis by estimating the Average Marginal Component Effects (AMCE) of scenario attributes. Our dependent variables of how likely a respondent is to go vote under a particular set of trip conditions, or how likely it is that they would allow (for men) or be allowed (for women) to go, were coded on a Likert 1-5 scale and are rescaled to a 0-1 scale. On this scale, 0 signifies that they are "very unlikely" to go vote and 1 that they are "very likely" to go vote, as in Hainmueller et al. (2014). We estimate the AMCE using a linear probability model, regressing the dependent variable on

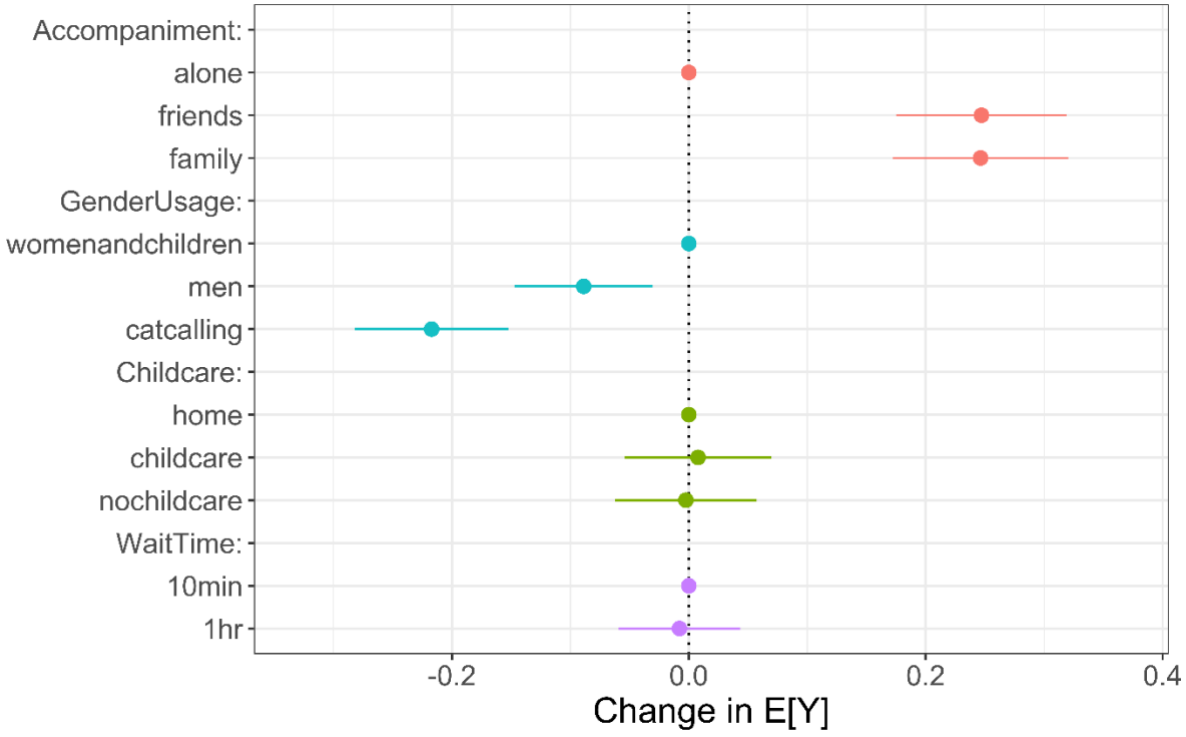
[11] Our enumerators are local to the area and hired through the Centre for Economic Research in Pakistan. Interviews are conducted in Urdu or Punjabi based on the enumerator's assessment of the respondent's preferred language. The enumerator notes the primary language used in each interview.

dummy variables for each attribute level, and cluster standard errors at the respondent level. Our main analysis is the treatment effect of mobility attributes for women.

7 Survey Experiment Results

We present our main results – the impact of day-of mobility on women's expressed likelihood of voting – in Figure 2. Consistent with our predictions and patterns in the 2018 election data, we find that women report a higher willingness to vote when they can more easily move outside the home. This is the case for both of our attributes related to accompaniment on the way to the polls, as well as the gender usage of the route.

Figure 2: Election-day mobility and likelihood of political participation (women)



Note: This plot shows Average Marginal Component Effect (AMCE) estimates of the effects of day-of-voting trip attribute values on ratings for how likely female respondents are to go vote. The dependent variable is rescaled to vary from 0 ("very unlikely" to go vote) to 1 ("very likely" to go vote). Horizontal bars represent 95% confidence intervals.

In particular, women rate election-day voting scenarios 0.25 points higher ($p < 0.001$) when they travel with female friends than alone on the 0 to 1 scale, and also 0.25 points higher ($p < 0.001$) when with their male family members than alone. These changes approximate one point on the Likert scale, e.g., changing from "neither unlikely nor likely" to "somewhat likely" upon seeing voting accompaniment, compared to going alone.

In addition to accompaniment, our results suggest that women consider the gender usage of the route when deciding whether or not to go vote. Compared to a "safe" street environment with other women and children prominently on the street, women rate trip scenarios where only men are on the street 0.09 points lower ($p < 0.01$) on the 0 to 1 scale. Moreover, women report that they would be even less likely to vote if they expected catcalling men along the route to the polling station. They rated these trip scenarios 0.22 points lower ($p < 0.001$) compared to those featuring the safest street environment, all else equal.[12]

However, in our survey results, it is not clear that expectations about childcare or expected wait times at the polling station impact women's likelihood of voting. Compared to the baseline of having someone at home watching their children, women do not report a change in their propensity to go vote when they imagine bringing their children with them or where polling station childcare is provided. Similarly, imagining an hour-long wait time—above average but not unheard of in national elections in Pakistan—does not impact women's expressed likelihood of voting. This stands in contrast to 2018 election data, where women assigned to polling stations with more voters per booth were, in fact, less likely to turn out. Yet, as shown in prior work, women's turnout behavior is likely to also be influenced by their spouses, fathers-in-law, or other male heads of households.

To incorporate male decision-making into the analysis, we report how likely male "gatekeepers" are to *allow* female family members to vote under distinct trip environments in Figure 3. In contrast to women's turnout preferences,[13] men are less likely to allow women to vote when they expect longer wait times ($p < 0.001$). If men are in charge of election-day transport, this finding could explain why—if women's motivation to turn out is inelastic to wait times—reported female turnout is lower when lines are longer.

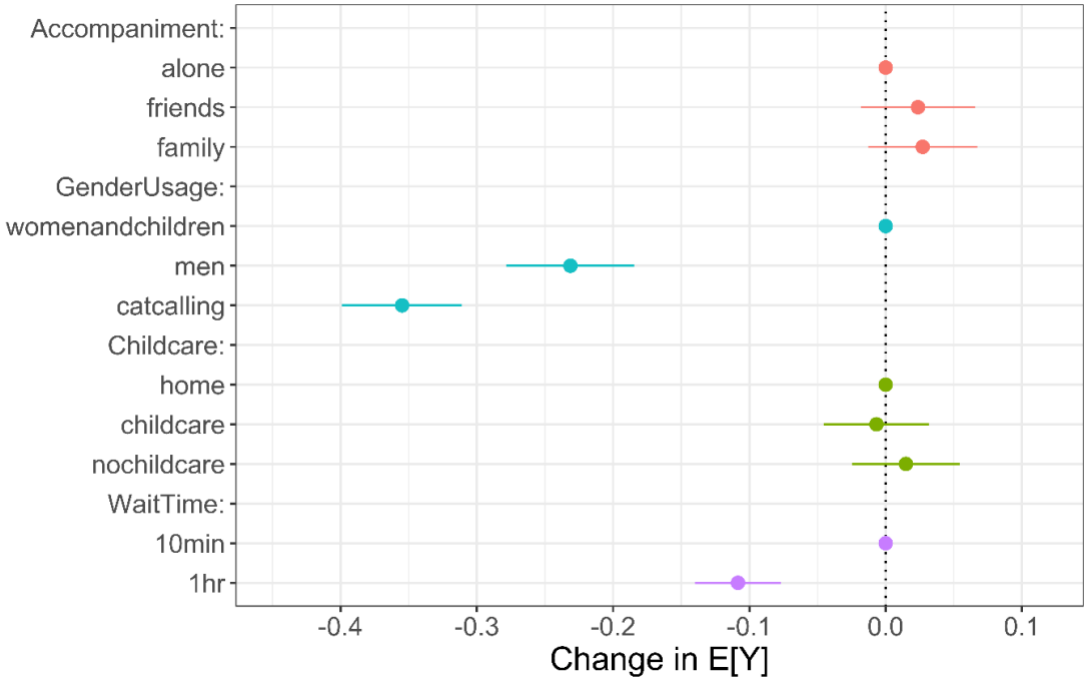
Results suggest that men are moved by gender usage of streets, as they are much less likely to allow political participation when streets are predominantly male (-0.23 points on the 0 to 1 scale) and when there are catcallers on the streets (-0.35 points), with both estimates significant at an $a = 0.001$ level. Unlike women's preferences for their own political participation, men do not express distinct

[12] There is a statistically significant difference between attribute level "men" and attribute level "catcalling" men. Even if we assume that men on the street is a treatment targeting only perceptions of *norms* about the acceptability of women's voting in male-dominated areas, this difference shows that lack of mobility presents an additional hurdle to women's turnout.

[13] We note that results from when women themselves think they will be *allowed* to go are not distinguishable from when they *would* go.

propensities to allow voting (at conventional levels of significance) under different types of women's accompaniment to polling stations. Men are similarly unmoved by childcare options.

Figure 3: Men allowing female family members' political participation



Note: This plot shows Average Marginal Component Effect (AMCE) estimates of the effects of day-of-voting trip attribute values on ratings for how likely male respondents are to allow their female family members to go vote. The dependent variable is rescaled to vary from 0 ("very unlikely" to allow to go vote) to 1 ("very likely" to allow to go vote). Horizontal bars represent 95% confidence intervals.

All in all, our results look "under the hood" at women's turnout calculus on election day. The conjoint experiment provides suggestive evidence for why single-gender polling stations in Pakistan have actually decreased women's turnout and why the mundane decisions of election commission bureaucrats on voting locations can also impact their turnout. We propose that women's disproportionately low levels of mobility in Pakistan render building and location attributes non-negligible for women. In particular, we provide evidence that women are less likely to turn out when they lack familial accompaniment (e.g., single-gender polling stations) and when rowdy men on the street pose a safety risk (which can be mitigated by greater familiarity with a location and accompaniment).

8 Conclusion

This paper investigates Pakistan's persistent gender gap in turnout. We focus on day-of mobility as a significant element of women's voting-day calculus. Although mobility limitations inhibit women's labor force participation and education choices in South Asia, it has been unclear how these constraints affect women's voter turnout (a low-frequency and symbolic form of political participation).

In this paper, we use polling station-level data from Pakistan's 2018 national election to explore how bureaucratic election decisions disproportionately impact some groups' political representation. We provide suggestive evidence that women's turnout is higher where they can feasibly combine their trips to the polling station with their male family members' trips and when they are already familiar with the polling station.

We supplement this analysis with a conjoint experiment to uncover the mechanisms behind this result. We find that women's decisions to vote are indeed sensitive to concerns about the journey to their assigned polling location. Women are less likely to vote when they must go to the polling station alone or when the gender usage of the street is skewed towards men. When men are asked about allowing women to vote, they are also sensitive to specific safety issues. Men also report that they are less likely to allow women to vote if voting takes a long time. Our results do not show childcare as a factor for either men or women, potentially because polling place childcare is a feature that has not yet been implemented during elections in Pakistan.

Taken together, our results suggest that initiatives to increase women's political participation should seriously consider women's mobility. This could involve enhancing women's safety and comfort when going to vote, perhaps by stationing female voting officials along routes or encouraging group-based travel to polling stations. Overall, reforms related to mobility might allow for a greater inclusion of women in the electoral process.

References

Ahmad, N. M., Ahmad, M. M. and Masood, R. (2020). 'Socio-psychological implications of public harassment for women in the capital city of Islamabad,' *Indian Journal of Gender Studies,* 27(1), pp. 77–100.

Ahmed, B., Yousaf, F. N. and Asif, U. (2019). 'Combating street harassment: A challenge for Pakistan,' *Women & Criminal Justice,* 31(4), pp. 283–293.

Auerbach, A. M. and Thachil, T. (2018). 'How clients select brokers: Competition and choice in India's slums,' *American Political Science Review,* 112(4), pp. 775–791.

Barnes, T. D. and Burchard, S. M. (2013). '"Engendering" politics: The impact of descriptive representation on women's political engagement in Sub-Saharan Africa,' *Comparative Political Studies,* 46(7), pp. 767–790.

Borker, G. (2021). 'Safety first: Perceived risk of street harassment and educational choices of women.' *World Bank Policy Research Working Paper,* No. 9731. Available at: https://openknowledge.worldbank.org/handle/10986/36004.

Brady, H. E. and McNulty, J. E. (2011). 'Turning out to vote: The costs of finding and getting to the polling place,' *American Political Science Review,* 105(1), pp. 115–134.

Brady, H. E., Verba, S. and Schlozman, K. L. (1995). 'Beyond SES: A resource model of political participation,' *American Political Science Review 89*(2), pp. 271–294.

Brulé, R. and Gaikwad, N. (2021). 'Culture, capital, and the political economy gender gap: Evidence from Meghalaya's matrilineal tribes,' *Journal of Politics*, 83(3), pp. 864-850.

Burden, B. C., Canon, D. T., Mayer, K. R. and Moynihan, D. P. (2014). 'Election laws, mobilization, and turnout: The unanticipated consequences of election reform,' *American Journal of Political Science*, 58(1), pp. 95–109.

Burns, N., Schlozman, K. L. and Verba, S. (2001). *The private roots of public action: Gender, equality, and political participation.* Cambridge, Mass: Harvard University Press.

Chattha, M. K. and Lakhtakia, S. (2020). 'The gap within: Impact of separate-gender polling stations on turnout,' *Blavatnik School Working Paper*, No. 2020/037. Available at: https://www.bsg.ox.ac.uk/research/publications/gap-within-impact-separate-gender-polling-stations-turnout.

Cheema, A., Khan, S., Mohmand, S. K., Kuraishi, A. and Liaqat, A. (2019). 'Pakistan's participation puzzle: A look at the voting gender gap,' *United States Institute of Peace.* Available at: https://www.usip.org/blog/2019/07/pakistans-participation-puzzle-look-voting-gender-gap.

Cheema, A., Khan, S., Mohmand, S. K. and Liaqat, A. (2021). 'Canvassing the gatekeepers: A field experiment to increase women's electoral turnout in Pakistan,' *Harvard University*, Working Paper. Available at: https://scholar.harvard.edu/files/asadliaqat/files/canvassing_gatekeepers.pdf.

Cheema, A., Khwaja, A. I., Naseer, M. F. and Shapiro, J. N. (2020). 'Glass walls: Experimental evidence on access constraints faced by women,' Working Paper. Available at:

https://scholar.princeton.edu/sites/default/files/jns/files/ckns_glass_walls_2020-10-08.pdf.

Chhibber, P. (2002). 'Why are some women politically active? The household, public space, and political participation in India,' *International Journal of Comparative Sociology*, 43(3-5), pp. 409–429.

Dastageer, G., Zaidi, S. and Safdar, R. (2018, October 4). 'A look into the turnout of women voters for the 2018 elections.' *The Herald.* Available at: https://herald.dawn.com/news/1398671.

Epperly, B., Witko, C., Strickler, R. and White, P. (2020). 'Rule by violence, rule by law: Lynching, Jim Crow, and the continuing evolution of voter suppression in the U.S,' *Perspectives on Politics*, 18(3), pp. 756–769.

Gerber, A. S. and Green, D. P. (2000). 'The effects of canvassing, telephone calls, and direct mail on voter turnout: A field experiment,' *American Political Science Review*, 94(3), pp. 653–663.

Giné, X. and Mansuri, G. (2018). 'Together we will: Experimental evidence on female voting behavior in Pakistan.' *American Economic Journal: Applied Economics*, 10(1), pp. 207–235.

Goyal, T. (2020). 'How women mobilize women into politics: A natural experiment in India.' Working Paper. Available at: https://www.semanticscholar.org/paper/How-Women-Mobilize-Women-Into-Politics%3A-A-Natural-Goyal/bce5b6206e858ba43f4bec6966efd50ea1b9fd79.

Hainmueller, J. and Hopkins, D. J. (2015). 'The hidden American immigration consensus: A conjoint analysis of attitudes toward immigrants,' *American Journal of Political Science*, 59(3), pp. 529–548.

Hainmueller, J., D. J. Hopkins, and T. Yamamoto (2014). 'Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments,' *Political Analysis*, 22(1), pp. 1–30.

Hajnal, Z., Lajevardi, N. and Nielson, L. (2017). 'Voter identification laws and the suppression of minority votes,' *Journal of Politics*, 79(2), pp. 363–379.

Horiuchi, Y., Markovich, Z. and Yamamoto, T. (2021). 'Does conjoint analysis mitigate social desirability bias?' *Political Analysis*, [Online].

Junaid, S. U., Majid, H., Malik, A., Shahid, A. and Vyborny, K. (2020). 'Transport and urban labour market integration: Evidence on travel time and congestion from a mass transit quasi-experimental evaluation and evidence on firms from a 24andomized control trial in Pakistan,' *International Initiative for Impact Evaluation*, Final Report. Available at: https://developmentevidence.3ieimpact.org/search-result-details/impact-evaluation-repository/transport-and-urban-labour-market-integration-evidence-on-travel-time-and-congestion-from-a-mass-transit-quasi-experimental-evaluation-and-evidence-on-firms-from-a-randomised-control-trial-in-pakistan/8967.

Karpowitz, C. F., Mendelberg, T. and Shaker, L. (2012). 'Gender inequality in deliberative participation,' *American Political Science Review*, 106(3), pp. 533–547.

Khan, A. and Naqvi, S. (2020). 'Dilemmas of representation: Women in Pakistan's assemblies,' *Asian Affairs*, 51(2), pp. 286–306.

Khan, S. (2020a). *Making democracy work for women: Essays on women's political participation in Pakistan*. Ph.D. thesis, Columbia University.

Khan, S. (2020b). 'Women in electoral politics: an account of exclusion,' In Mufti, M., Shafqat, S. and Siddiqui, N. (eds.) *Pakistan's political parties: surviving between dictatorship and democracy*. Washington, D.C: Georgetown University Press, pp. 162-176.

Kondylis, F., Legovini, A., Vyborny, K., Zwager, A. and Andrade, L. (2020). 'Demand for "safe spaces": Avoiding harassment and stigma,' *World Bank Policy Research Working Paper*, No. 9269. Available at: https://openknowledge.worldbank.org/handle/10986/33853?show=full.

Menzel, A. and Woodruff, C. (2021). 'Gender wage gaps and worker mobility: Evidence from the garment sector in Bangladesh,' *Labour Economics*, 71, 102000.

Mohmand, S. K. (2019). *Crafty oligarchs, savvy voters: Democracy under inequality in rural Pakistan*, Vol. 8. Cambridge, U.K.: Cambridge University Press.

Mumtaz, Z. and Salway, S. (2005). '"I never go anywhere": Extricating the links between women's mobility and uptake of reproductive health services in Pakistan,' *Social Science & Medicine*, 60(8), pp. 1751–1765.

Muralidharan, K. and Prakash, N. (2017). 'Cycling to school: Increasing secondary school enrollment for girls in India,' *American Economic Journal: Applied Economics*, 9(3), pp. 321–350.

Parthasarathy, R., Rao, V. and Palaniswamy, N. (2019). 'Deliberative democracy in an unequal world: A text-as-data study of South India's village assemblies,' *American Political Science Review*, 113(3), pp. 623–640.

Pettigrew, S. (2017). 'The racial gap in wait times: Why minority precincts are underserved by local election officials,' *Political Science Quarterly*, 132(3), pp. 527–547.

Prillaman, S. A. (2021). 'Strength in numbers: How women's groups close India's political gender gap,' *American Journal of Political Science,* [Online].

Sajjad, F., Vyborny, K. and Field, E. (2018). 'Overcoming barriers to women's mobility in Punjab.' Available at: https://pcsw.punjab.gov.pk/system/files/overcoming.pdf.

Sonnet, L. (2019). 2018 Pakistani general election polling station data. Available at: https://github.com/colincookman/pakistan_polling_stations_2018/.

Uddin, A. T. (2017). 'A legal analysis of Ahmadi persecution in Pakistan,' in Kirkham, D. M. (ed.) *State responses to minority religions*. Milton Park, U.K.: Routledge, pp. 81-97.

UN Women (2015). 'Inclusive electoral processes: A guide for electoral management bodies on promoting gender equality and women's participation,' *United Nations*. Available at: https://www.unwomen.org/en/digital-library/publications/2015/7/inclusive-electoral-processes.

UN Women (2018). 'Women's safety audit in public transport in Lahore,' *United Nations*. Available at: https://asiapacific.unwomen.org/en/digital-library/publications/2018/05/womens-safety-audit-in-public-transport-in-lahore.

World Bank (2005). 'Bridging the gender gap: Opportunities and challenges,' *World Bank*. Available at: https://openknowledge.worldbank.org/handle/10986/8453.

Appendix

Table A1: Descriptive statistics of sample pool (all NGO clients)

Question	Options	Percentage
Highest education level of head of household	Never attended school	55.8
	Less than Class 5	20.6
	Class 6 to Class 10	20.7
	Class 11 or beyond	2.9
What kind of toilet is used by the household?	There is no toilet in the household	0.3
	Dry raised latrine or dry pit latrine	25.9
	Flush connected to public sewage, to pit, or to open drain	73.8
Does the household own the following vehicles?	Neither car/tractor nor motorcycle/scooter	22.4
	No car/tractor but 1+ motorcycle/scooter	60.9
	1+ car/tractor but no motorcycle/scooter	3.2
	1+ car/tractor, 1+ motorcycle/scooter	13.5
Does the household own a refrigerator, freezer, or washing machine?	Yes	95.5
	No	4.5
Does the household own an AC, air cooler, geyser, or heater?	Yes	13.0
	No	87.0

Table A2: Demographic characteristics for survey respondents

Statistic	N	Median	Mean	St. Dev.	Min	Max
Woman	534	0	0.48	0.50	0	1
Age	534	37	37.31	8.26	18	65
Married	527	1.00	0.97	0.16	0.00	1.00
Muslim	508	1.00	0.82	0.39	0.00	1.00
N children under 16	431	3.00	2.67	1.66	0.00	11.00
Interview in Urdu	487	0.00	0.47	0.50	0.00	1.00
Never attended school	531	0.00	0.50	0.50	0.00	1.00
Employed or self-employed	517	1.00	0.51	0.50	0.00	1.00
Own scooter	453	1.00	0.76	0.43	0.00	1.00
Lahore district	523	0.00	0.49	0.50	0.00	1.00
Lahore city	517	0.00	0.34	0.47	0.00	1.00