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The Empty Promise of Urbanisation: Women's Political Participation in Pakistan

**Ali Cheema, Asad Liaqat, Sarah Khan,
Shandana Khan Mohmand and Shanze Fatima Rauf**

February 2021

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Summary

Do big cities enable or hinder women's electoral participation? What are the determinants of women's participation in big cities and how are they different from those in rural areas? We use the Election Commission of Pakistan's novel gender-disaggregated constituency level data set for the 2018 elections to answer these questions in the context of Pakistan, a country that has seen rapid urbanisation and today hosts 14 big cities with populations of over half a million people. Contrary to expectations, we find that women's electoral participation is 8.5 per cent lower in big cities compared to rural areas and this is mirrored by a higher gender gap in participation in this context. In big cities we do not find support for theories that suggest women's increased political participation is linked to a fall in the burden of care work, an increase in women's intra-household bargaining power, and their entry into the paid labour force. The gender gap in political participation is higher in big cities even though city women do much better on all these indicators compared to their rural counterparts. We do, however, find a positive association between education and women's political participation in big cities. We use data from the Herald-SDPI national opinion poll conducted in the run up to the 2018 elections to show that women's lower electoral participation in cities is mirrored by more tenuous linkages between them and political parties compared to linkages in rural areas. This evidence suggests that weak engagement between political parties and women voters may be an important channel explaining women's lower electoral participation in cities. We also find that women's political participation is lower in big cities with greater exposure to political violence.

Keywords

Gender; urbanisation; political participation.

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Contents

Acknowledgements	9
<hr/>	
1. Introduction	10
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2. Urbanisation, socioeconomic transformation, and women's political participation	13
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3. Understanding the determinants of women's political participation	21
3.1 Individual-level determinants	21
3.2 Contextual determinants	23
<hr/>	
4. Data, variable construction, and empirical strategy	26
4.1 Data	26
4.2 Variable construction	28
4.2.1 Women voter turnout	28
4.2.2 Individual- and household-level determinants	28
4.2.3 Contextual determinants	29
4.3 Summary statistics	30
4.4 Empirical strategy	31
<hr/>	
5. Results	32
5.1 The role of individual, household, and contextual factors as determinants of women's turnout in Pakistan's big cities and rural areas	32
5.2 Differences in engagement between women voters and political parties in big cities and rural areas	35
5.3 Political violence and women's political participation in big cities	37

6. Limitations and conclusion	40
References	41
Annexe A	46
Annexe B	48
Annexe C	49
Annexe D	50

Figures

Figure 2.1 Annual population growth rate	13
Figure 2.2 Distribution of the dependency ratio	14
Figure 2.3a Distribution of women's no formal education attainment	15
Figure 2.3b Distribution of women's higher education attainment	15
Figure 2.4 Distribution of women's decision-making power within the household	16
Figure 2.5 Women's labour force participation rate in big cities and rural areas	18
Figure 5.1 Party worker contact before elections	36

Tables

Table 2.1 Urbanisation and female turnout	19
Table 2.2 Urbanisation and male turnout	20
Table 4.1 Summary statistics for individual-level determinants of political participation – women sample	30
Table 5.1 Determinants of political participation in rural majority areas and big cities	33
Table 5.2 Determinants of political participation in rural supra-majority areas	34
Table 5.3 Big cities, violence, and political participation PSLM 2013–14	39
Table A1 Big city, rural, and mixed constituencies	46
Table A2 List of dropped constituencies	47
Table B1 Summary statistics for individual-level determinants of political participation – male sample	48
Table B2 Summary statistics for contextual determinants of political participation	48
Table C1 Year weights	49
Table D1 Distribution of sampling weights	51

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1. Introduction

Do big cities enable or constrain women's electoral participation? We answer this question in the context of Pakistan, which is the second worst ranked country on the Global Gender Gap Index. Pakistan's case can provide valuable insights into this question as it had transformed into a majority urban country by the turn of the century and 14 of its cities currently have a population of more than half a million each. Households residing in these big cities have dependency ratios¹ that are on average 28 per cent lower than their rural counterparts. Adult women in big cities are more than three times as likely to have finished high school compared to rural women. Women in big cities on average score orders of magnitude higher on a women's empowerment index score² than rural women. These facts lead us to ask two related questions in this paper. First, is the social change associated with the rise of big cities in Pakistan empowering women politically compared to their rural counterparts? Second, has this urban transformation been able to close the gender gap in political participation in cities?

Understanding the relationship between urbanisation and political participation is important since urbanisation is argued to be a critical feature of democratic strengthening. Cities are hypothesised to facilitate political participation by creating greater space for collective action and by engendering the development of civic capital (Glaeser and Steinberg 2016). If cities are, indeed, associated with higher levels of political participation, what are the determinants of women's participation in cities? Are these determinants different from the determinants of participation in rural areas? Are the determinants of women's political participation in cities different from the determinants of men's participation?

In this paper, we use quantitative analysis to offer some preliminary answers to these questions in the Pakistani context. We estimate the difference in women and men's electoral participation between big cities and rural areas. This allows us to analyse whether big cities are acting as enablers of women's political participation and whether gender gaps in participation are narrower here. Empirical findings draw on the Election Commission of Pakistan's (ECP) novel gender-disaggregated constituency-level turnout data for the 2018 General Election.

¹ The dependency ratio is a ratio of those typically not in the labour force and those typically in the labour force within a household. A higher dependency ratio indicates a higher number of dependents for each breadwinner.

² We create the women's empowerment index using the Pakistan Social and Living Standards Measurement Survey (PSLM) 2013–14. See section 4.2.2 for details.

We evaluate the importance of commonly suggested individual and household level determinants of women's electoral participation in the literature, namely; women's education, their labour force participation, the household dependency ratio and women's decision-making power in the household. We also estimate the importance of political and social contextual factors used in the literature, which include effective number of parties, proportion of women in political leadership positions and ethno-linguistic fractionalisation. The analysis of determinants combines the ECP gender-disaggregated data with the 2013–14 round of the Pakistan Social and Living Standards Measurement (PSLM) survey.

We find that women's electoral participation is between 8–10 per cent lower in big cities compared to rural areas. We find a much smaller gap in men's turnout in big cities compared to rural areas, which means that the gender gap in participation is higher in cities compared to rural areas. These results persist even if we control for the differences in women and men's turnout between provinces and administrative divisions that on average comprise of three to four districts. In the case of Pakistan's big cities, it seems that the more things change, the more women's political participation worsens. This is puzzling given that big cities do much better on a range of meaningful social indicators.

Interestingly, the proportion of educated women in a big city constituency is a significant correlate of women's turnout in this context, however such an association does not exist in rural areas. This suggests that education may act as a catalyst for women's political participation in urban areas, but not so in rural areas. The higher level of women's educational attainment in big cities is, however, not able to overturn the overall trend of lower participation compared to rural areas.

We find that women's labour force participation has a positive association with women's electoral participation in rural areas and their increased bargaining power within the household has a positive but weak association in these areas. This provides some support for theories that suggest that women's access to, and control over resources is an important precondition for their political participation. However, we do not find a similar positive association in big cities between women's labour force participation, their increased bargaining power within the household, and their political participation.

In terms of household factors, the dependency ratio is negatively correlated with women's electoral participation in rural areas. This is consistent with theories which argue that a combination of larger households and entrenched gender roles increases the burden of unpaid care work on women, which constrains them in terms of the time and resources needed to participate in elections. Again, we do not find any association between these two factors in big cities, which suggests that the reduced burden of care work within the household is an insufficient catalyst for participation in public activities such as politics.

Overall, with the exception of education, the results do not provide support for an association between women's electoral participation in big cities and individual or household factors emphasised in the literature as catalysts of participation. The muted effect of these factors could highlight why Pakistan's urban transformation is not able to close the gender gap in political participation. These findings also suggest that we have to look at other factors to find an explanation for women's lower turnout in big cities.

In terms of contextual factors, we find that higher levels of partisan competition in big city constituencies dampens women's turnout, even though it has no significant association with turnout in rural areas. This suggests that it may be important to analyse the nature of engagement between political parties and women voters in big cities and rural areas. We use data from a national public opinion survey conducted in the run up to Pakistan's 2018 General Election to analyse the strength of engagement between political parties and women citizens around electoral mobilisation and articulating demands for public services and jobs. We find that the engagement between political parties and women around electoral mobilisation is much stronger in rural areas compared to big cities. Interestingly there is no significant difference between the two areas in the strength of engagement between political parties and men.

In rural areas, women are mobilised into collective voting blocks by male family or community members as part of clientelist exchanges between them and political parties. However, evidence shows a weakening of women's mobilisation into collective voting blocks, as well as a weakening of clientelist linkages, in big cities. We argue that the reduced mobilisation of women by clientelist networks in big cities may be an important cause of women's lower electoral turnout in this context. These results also caution us against interpreting women's higher electoral turnout in rural areas as a measure of their political empowerment.

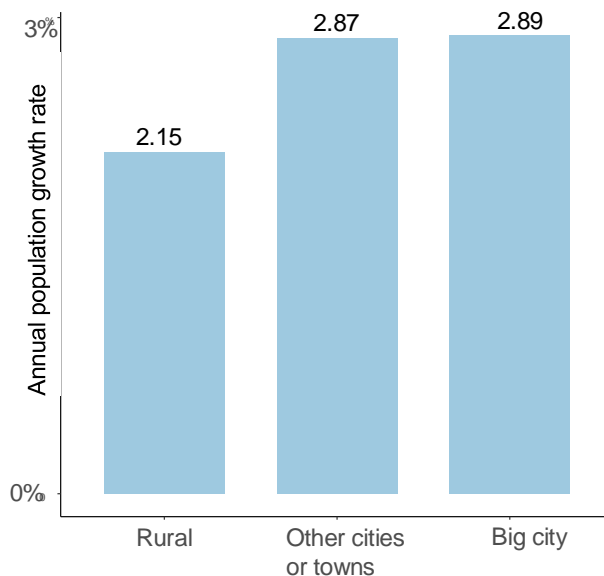
The recent literature on politics in Pakistan emphasises the importance of political violence as an important contextual factor. We analyse whether there is an association between recent exposure to political violence and women's turnout within our sample of big cities using the BFRS data (Bueno de Mesquita *et al.* 2013) on political violence in Pakistan's cities between 1988 and 2011. We find a significant negative association between exposure to a history of political violence and women's electoral turnout in 2018 in Pakistan's big cities.

The rest of the paper proceeds as follows. In section 2, we use data to describe the nature of socioeconomic change in Pakistan and analyse the differences in the electoral participation of women and men in big cities and rural areas. Section 3 reviews the literature to motivate the choice of individual, household and contextual factors used in the analysis. Section 4 describes the data and the empirical strategy. Section 5 presents the results and section 6 discusses limitations and concludes the paper.

2. Urbanisation, socioeconomic transformation, and women's political participation

An increasing concentration of the population in cities is a striking feature of Pakistan's ongoing structural transformation. Recent estimates suggest that Pakistan became an urban majority country by the turn of the last century (Ali 2002; Uchida and Nelson 2010).³ An important feature of Pakistan's urbanisation is that its big (or 0.5 million plus) cities are growing much faster than its rural areas and maintaining pace with population growth in smaller towns and cities (Figure 2.1).

Figure 2.1 Annual population growth rate



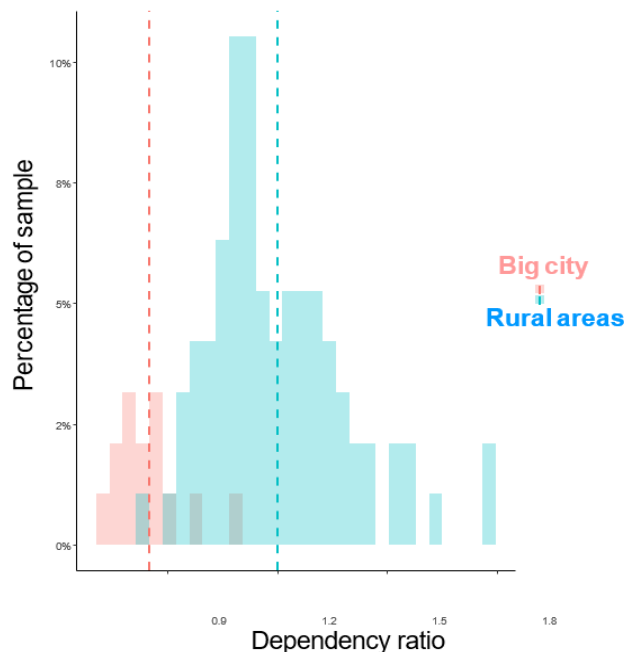
Source: Authors' own, based on data from Pakistan Census 1998 and 2017

We use data from the Pakistan Social and Living Standards Measurement (PSLM) survey (2013–14) to present stylised facts about socioeconomic change in Pakistan's big cities that have implications for women's political participation. Social demands on women's time are acknowledged as an important constraint

³ These studies use the agglomeration index to estimate urbanisation in Pakistan. Uchida and Nelson's (2010) agglomeration index uses population size, population density and travel time to the nearest large city to define urban areas.

on women's autonomy and participation (Duflo 2012). Studies from across the globe show that women bear a disproportionate burden of unpaid care work in the household and this burden increases with the number of dependents (Berniell and Sanchez-Paramo 2011; Ferrant and Thim 2019; Zaidi *et al.* 2017). Demographers have found systematic differences in fertility between rural and urban areas across a range of countries (Jaffe 1942; Martine, Alves and Cavenaghi 2013; Notestein 1945; Thompson 1935) that place a greater burden of care work on rural women. We find this pattern holds true in Pakistan. Figure 2.2 shows that the dependency ratio in an average household in big cities is systematically lower than the ratio in rural areas.

Figure 2.2 Distribution of the dependency ratio

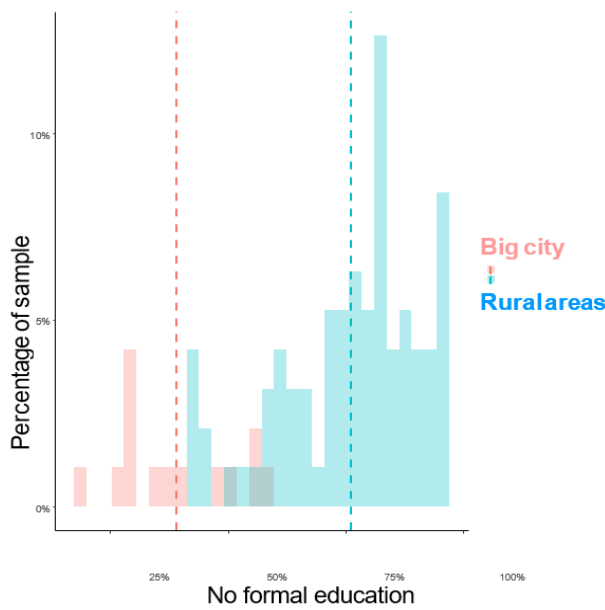


Source: Authors' own, based on PSLM 2013–14

Women in Pakistan's big cities also have on average a much higher educational attainment than women living in rural areas. The percentage of women with no formal education in big cities is almost half the level found in rural areas and the percentage of city women with at least a graduate degree is seven times higher than the proportion in rural areas (Figures 2.3a and 2.3b). Women in big cities are also more likely to be empowered and have greater autonomy in household decision-making (Figure 2.4). To measure women's empowerment, we constructed a women's empowerment index that captures decision-making power within the household by combining PSLM questions about the degree of control women have over decisions concerning continuation of their education, entering a job and purchase of medical services and expenditure on food and non-food consumption items in the household. A higher positive score on the

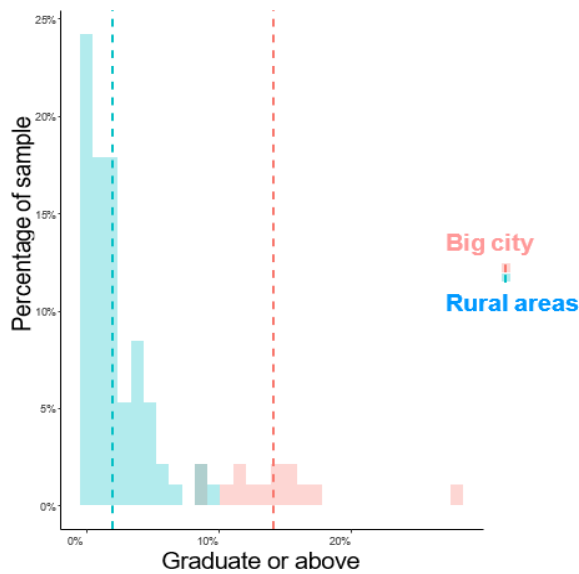
index indicates higher empowerment. Figure 2.4 shows that the average value of the index is much higher for big cities compared to rural areas.

Figure 2.3a Distribution of women’s no formal education attainment



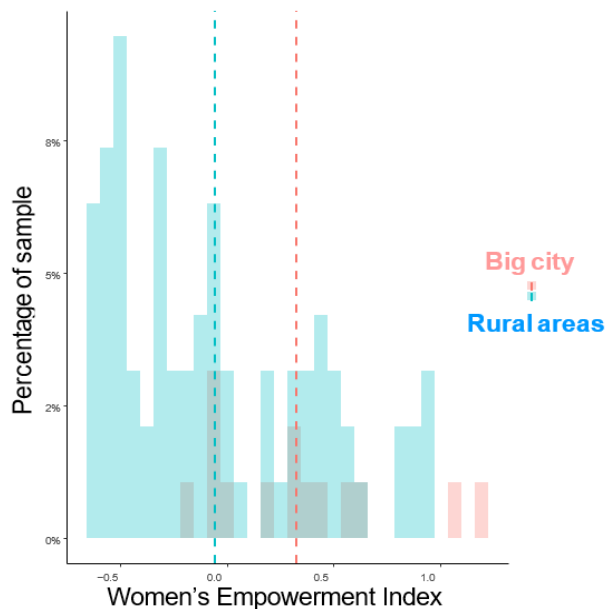
Source: Authors’ own based on PSLM 2013–14

Figure 2.3b Distribution of women’s higher education attainment



Source: Authors’ own based on PSLM 2013–14

Figure 2.4 Distribution of women's decision-making power within the household



Source: Authors' own based on PSLM 2013–14

These facts lead us to ask whether such positive socioeconomic changes are associated with higher participation among women in big cities relative to rural areas? Pakistan's urban transition appears to belie historical expectations in terms of women's economic participation; we find that women are far less likely to participate in the paid labour force in big cities in spite of having higher educational attainment, greater levels of empowerment within the household and having to provide care for a smaller number of dependents (Figure 2.5).

This is interesting, as the literature highlights positive labour market returns to education (Duflo 2001). Increases in post-secondary education are hypothesised to increase women's labour force participation in white-collar jobs (Goldin 1995). The literature also finds a negative relationship between women's labour force participation and fertility (Angrist and Evans 1998; Bailey 2006; Bloom *et al.* 2009; Kim and Aassve 2006; Levine *et al.* 1999; Rosenzweig and Wolpin 1980).

We find a similar puzzle in the case of women's political participation. Women in big cities are significantly less likely to vote than women living in rural areas, towns and smaller cities. Table 2.1 shows that women's electoral participation in Pakistan's big cities is on average 8 per cent lower than their counterparts in these other areas (column 1). We find that this difference remains statistically significant even after controlling for provincial fixed effects (column 2). Pakistan is a federation that consists of four provinces. Each province consists of

divisions, which are administrative units that consist of adjacent districts⁴ that include cities, towns and rural areas. The finding that big cities have on average, 8 per cent lower turnout than other areas remains in specifications that control for variation across these divisions (column 3). This implies that big cities have lower women's turnout as compared to rural areas of the same district or of adjacent districts within the same division.

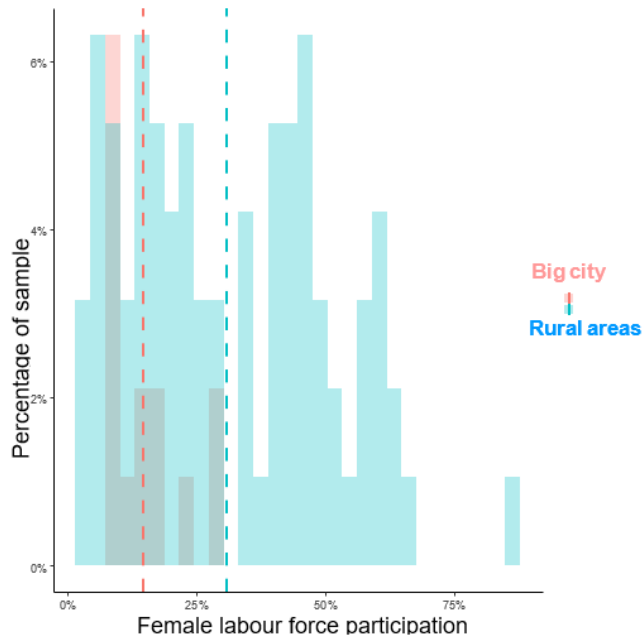
However, do women voters in big cities have lower electoral participation than their rural counterparts? Since a large majority of non-big city constituencies comprise of rural areas, smaller cities and towns, we answer this question by comparing women's electoral participation in big city constituencies with constituencies where a majority (greater than 50 per cent) of registered voters live in rural areas (Table 2.1 columns 4–6). The finding that turnout is lower among big city women remains robust even if we restrict our sample to rural majority constituencies and the result is robust to specifications that control for provincial or divisional fixed effects.

Table 2.2 finds a smaller negative effect of big cities on men's turnout that is not robust across specifications (columns 1–6). This suggests the existence of a significant gender gap in big cities. These findings raise the question of why big cities depress women's turnout compared to rural areas, especially when women residing there are doing much better on a range of important socioeconomic indicators.

This question is important because cities are hypothesised to facilitate democratisation by mobilising a greater demand for democracy, collective action and increased 'civic capital' (Glaeser and Steinberg 2016). Although the expectation is that urban residents are more likely to support democratic ideals, the literature finds a paradoxical relationship between political engagement and urbanisation. Researchers have highlighted that citizens living in urban areas are more likely to be interested in politics and participate in protests (*ibid.*), but less likely to vote in elections (Glaeser and Steinberg 2016; Monroe 1977; Rai 2011). However, there is little empirical evidence, to our knowledge, that analyses the factors that increase or attenuate women's political participation in the big city context. We aim to address this gap in the literature by analysing the individual, household and contextual factors associated with women's voter turnout in Pakistan's big cities. We also analyse whether the same factors explain women's participation in both the big cities and rural contexts. Finally, we analyse whether observed effects are gendered, that is do they only explain women's participation in big cities or do they explain the participation of both genders.

⁴ Each division on average, consists of three to four districts.

Figure 2.5 Women’s labour force participation rate in big cities and rural areas



Source: Authors’ own based on PSLM 2013–14

Table 2.1 Urbanisation and female turnout

	Female turn out in 2018 General Election					
	(1)	(2)	(3)	(4)	(5)	(6)
Big city constituency	-8.34*** (1.32)	-10.17* (2.55)	-8.05*** (0.95)	-8.50*** (1.34)	-10.42* (2.48)	-8.34*** (0.94)
Constant	49.34*** (0.82)	49.82*** (0.67)	49.27*** (0.25)	49.50*** (0.84)	50.03*** (0.67)	49.46*** (0.26)
Provincial fixed effects	No	Yes	Yes	No	Yes	Yes
Division fixed effects	No	No	Yes	No	No	Yes
Comparison constituencies	All others	All others	All others	Rural majority	Rural majority	Rural majority
N	241.00	241.00	241.00	232.00	232.00	232.00

Notes: Robust standard errors are reported in parentheses. Standard errors are clustered at the province level for fixed effect regressions. All Others refers to non-big city constituencies; Majority refers to constituencies with greater than 50 per cent of total registered voters living in rural areas.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own, based on gender-disaggregated data released by the Election Commission of Pakistan

Table 2.2 Urbanisation and male turnout

	Male turn out in 2018 General Election					
	(1)	(2)	(3)	(4)	(5)	(6)
Big city constituency	-3.49** (1.06)	-3.36 (2.97)	-1.41 (1.22)	-3.50** (1.07)	-3.46 (2.98)	-1.45 (1.21)
Constant	57.39*** (0.53)	57.35*** (0.78)	56.85*** (0.32)	57.40*** (0.55)	57.39*** (0.81)	56.84*** (0.33)
Provincial fixed effects	No	Yes	Yes	No	Yes	Yes
Division fixed effects	No	No	Yes	No	No	Yes
Comparison constituencies	All others	All others	All others	Rural majority	Rural majority	Rural majority
N	241.00	241.00	241.00	232.00	232.00	232.00

Notes: Robust standard errors are reported in parentheses. Standard errors are clustered at the province level for fixed effect regressions. All Others refers to non-big city constituencies; Majority refers to constituencies with greater than 50 per cent of total registered voters living in rural areas. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own, based on gender-disaggregated data released by the Election Commission of Pakistan

3. Understanding the determinants of women's political participation

In this section we discuss the individual, household, and contextual determinants of women's political participation that are highlighted as important in the literature. In the case of individual and household level factors we focus on four factors: education (Inglehart and Norris 2000), labour force participation (Iversen and Rosenbluth 2006; Iversen and Rosenbluth 2008; Schlozman, Burns, and Verba 1999), women's decision-making power in the household (Chhibber 2002) and the burden of care work in a household (Iversen and Rosenbluth 2006). In terms of contextual factors, the literature emphasises competition among electoral candidates (Blais 2006; Downs 1957; Jackman 1987; Kuenzi and Lambright 2007), the role of women political leaders (Beaman *et al.* 2012; Bhalotra, Clots-Figueras and Iyer 2013; Hansen 1997; Pande, Beaman, Chattopadhyay, Duflo and Topalova 2009), ethnic composition (Birnie and Van Cott 2007; Chandra 2004; Conroy-Krutz 2013; Ferree 2006; Posner 2005) and the experience of violence in local areas (Bratton 2008; Trelles and Carreras 2012).

3.1 Individual-level determinants

Education is considered one of the strongest predictors of women's political participation. The literature finds that individuals with higher levels of education are more likely to be involved in politics and to vote (Dee 2003; Desposato and Norrander 2009; Gleason 2001; Jackson 1995; Wolfinger and Rosenstone 1980; Verba, Kim and Nie 1978) because education is argued to provide the 'civic skills' necessary for political engagement (Burns, Schlozman and Verba 1994). Education is also positively correlated with factors that affect political participation such as political knowledge (Dow 2009) and political awareness (Jackson 1995). However, the developing country literature finds that poor and less educated citizens do not have lower (in fact may have higher) participation compared to better off and more educated individuals (Bratton 1999; Bratton and Logan 2006; Booth and Seligson 2008; Bratton, Chu and Lagos 2010; Desposato and Norrander 2009; Isaksson 2010; Krishna 2002; Kuenzi and Lambright 2010; Pande 2011; Yadav 2000). This is explained by the effective use of clientelist mobilisation and vote buying by politicians to target less educated and poor voters (Brusco, Nazereno and Stokes 2004; Blaydes 2006; Scott 1969; Stokes 2005). The mixed findings in the literature make it interesting to investigate whether women's educational attainment is associated with higher political participation in Pakistan's big cities, and whether we would observe similar results for rural areas as big cities.

Women's labour force participation also has implications for their involvement in politics. The literature finds that an increase in women's participation in paid work is associated with an increase in their political participation, suggesting that complementarities exist between the two forms of participation (Aalen, Kotsadam and Villanger 2019; Togeby 1994). Labour force participation is argued to affect the availability of time and money, which are important resources that can support political participation (Burns, Schlozman and Verba 1997). In addition, greater participation in work outside the home gives working women access to networks that provide knowledge and access that can reduce the cost of political engagement (Andersen 1975; Prillaman 2018; Sinclair 2012). However, this effect appears to be mediated by the structure of labour market opportunities that are available to women. The literature finds that the effect of labour force participation on political participation is likely to be muted for women who predominantly have access to employment with low returns and job security and limited career progression (Iversen and Rosenbluth 2006). Therefore, women's labour force participation is another important factor whose association with political participation needs to be analysed.

The literature also argues that the number of dependents within the household affects the accumulation of marketable skills and labour force participation (Iversen and Rosenbluth 2006, Zaidi et al. 2017). Investment in 'skills' that give women comparative advantage in the labour market is inversely related to the time spent within the household on unpaid work such as caring for dependents (Iversen and Rosenbluth 2006). Iversen and Rosenbluth (2006) show that an increase in the number of dependents increases the share of household work and decreases the probability of paid work. There is some evidence that larger household sizes are associated with lower political participation among women (Huysen, Sanchez and Vargas 2017). We would expect care work for dependents to be a less binding constraint on women's political participation in Pakistan's big cities as households have lower dependency ratios in this context.

Women's political participation is not just affected by gendered asymmetries in the labour market but also by gendered asymmetries in intra-household decision-making. Family is a critical unit of socialisation and the nature of interactions within the family has an important influence on political behaviour (Almond and Verba 1963). Greater decision-making autonomy within the household 'enhances feelings of political competence' (Burns, Schlozman and Verba 1997: 375) that can positively affect political participation. Women who are empowered within the home (Burns, Schlozman and Verba 1997) and are able to negotiate space for themselves within the household are more likely to participate in politics (Chhibber 2002). Gendered differences in intra-household bargaining not only influence the division of labour within the household but also perpetuate the gendered division of the 'public' and 'private' space (Iversen and Rosenbluth 2010). Thus, women who have less say within the household are less likely to

participate in politics. Intra-household inequalities also have an impact on women's autonomy to express political preferences, women with greater intra-household bargaining power being more likely to be able to express their distinct preferences (Khan 2017). The stylised facts suggest that women's intra-household bargaining power is much higher in big cities compared to Pakistan's rural areas and, therefore, it is important to analyse whether this factor is catalysing greater political participation among urban women.

3.2 Contextual determinants

Recent research shows that citizens' political participation is not only influenced by individual and household characteristics, but also affected by the political (Burns 2007) and the social context of local areas (Trelles and Carreras 2012) and their exposure to violence (Blattman 2009; Lupu and Peisakhin 2017). The literature has identified the density of women in political leadership positions and the structure of partisan competition on women's political participation as important political contextual variables. It considers ethnic heterogeneity as an important social contextual factor that influences citizens' political participation. We also look at the impact of violence on women's political participation as it is an important element of the context in many new democracies including Pakistan. This analysis is important because there is limited research on how these contextual factors affect women's electoral participation, especially in big city contexts.

According to the contextual cue theory, the political environment feeds into political behaviour and participation (Atkeson 2003). Exposure to women in leadership roles acts as 'cues' that not only stimulate women's engagement with the political sphere (Bhalotra, Clots-Figueras and Iyer 2013; Hansen 1997) but also affect voting behaviour (Brians 2005). Brians (2005) finds that the gender of the candidate dilutes women's partisan affiliation in the US, which is a strong predictor of how they vote. This is because women voters are more likely to vote for women candidates (*ibid.*). Literature from India finds that the increased presence of women in politics has an impact on the perception of gender roles within the public sphere and on citizen evaluations of women political leaders (Beaman *et al.* 2012; Pande *et al.* 2009). Greater exposure to women in politics reduces the evaluation bias of citizens against women leaders (Pande *et al.* 2009). Moreover, there is a 'role model effect' with exposure to women in leadership roles increasing the level and quality of women's political participation (Deininger *et al.* 2014). This suggests that contexts in which there is a higher density of women politicians may not only change the gender dynamics within the household and the community but also influence women's participation in politics.

Political competition is argued to have an ambiguous effect on voter turnout. Analysing turnout in industrial democracies, Jackman (1987) shows that an increase in the number of political parties decreases voting turnout. This observed reduction in turnout is intuitive as an increase in the number of political parties reduces the probability that an individual's vote will be decisive in an election, thereby decreasing the probability of voting (Blais 2006; Downs 1957; Jackman 1987; Kuenzi and Lambright 2007). Moreover, the cost of sourcing information in this environment is likely to be high, which would reduce turnout by increasing the costs of voting (Kuenzi and Lambright 2007). Alternatively, political competition can also positively affect turnout by increasing the choice set of voters because heightened competition pressurises parties to invest in greater mobilisation (Blais 2006).

The literature also highlights the importance of ethnicity as a contextual factor impacting citizens' political participation. This is because ethnicity is a means to process information about candidates especially in low information settings (Birnie and Van Cott 2007; Chandra 2004; Conroy-Krutz 2013; Ferree 2006; Posner 2005). In such settings, ethnicity is an easily available indicator of a candidate's 'quality' in terms of trust and capability (Posner 2005). Moreover, ethnic affiliations also signal the potential re-distributive consequences in terms of higher probability of net benefits to co-ethnics (*ibid.*). Evidence from Benin shows that co-ethnics are more likely to remember the good performance of incumbents from their ethnic group and are more likely to punish bad performance of non-co-ethnics (McClendon *et al.* 2017). Alesina and Ferrara (2000) find that after controlling for individual characteristics, citizen participation in social activities is lower in contexts with higher levels of ethnic heterogeneity. Belletini, Ceroni and Monfardini (2017) find a similar sizeable impact of ethnic heterogeneity on electoral turnout. Ichino and Nathan (2013) and Rubenson (2005) report the opposite finding and show that political participation is higher in ethnically and racially heterogeneous contexts.

Researchers have also emphasised the importance of violence as a contextual factor affecting political participation, especially in new democracies with a history of chronic conflict. A set of studies show that intergenerational exposure to violence is associated with an increase in political participation (Blattman 2009; Lupu and Peisakhin 2017). Blattman (2009) finds an increase in voting turnout among individuals who were abducted in Northern Uganda. Abduction captures the extent of violence witnessed by individuals and is identified as the main causal mechanism leading to greater political engagement (Blattman 2009). Analysing the intergenerational impact of violence using a multi-generational survey of Crimean Tartars who were deported in 1944, Lupu and Peisakhin (2017) find that the descendants of survivors who were exposed to higher levels of violence were more likely to be involved in politics. Moreover, this positive effect of violence on political engagement extends to greater

engagement in informal politics through greater involvement in political discussions and community group meetings (Bateson 2012). Bateson (2012) hypothesises that these effects are possibly due to the emotional effects of victimisation. In contrast, another set of studies find that neighbourhood violence levels and electoral intimidation are negatively associated with political participation (Bratton 2008; Trelles and Carreras 2012). However, there are no studies that analyse the impact of violence on women's political participation, especially in the big city context. This is an important contextual factor to analyse given Pakistan's recent history of exposure to social and political violence (Bueno de Mesquita *et al.* 2014).

4. Data, variable construction, and empirical strategy

4.1 Data

In order to analyse the relationship between urbanisation and women's political participation, we construct a data set combining the official electoral results of the 2018 General Election in Pakistan released by the Election Commission of Pakistan (ECP), the Pakistan Social and Living Standards Measurement Survey (PSLM) 2013–14 conducted by the Pakistan Bureau of Statistics, and the BFRS Political Violence in Pakistan data set.⁵

The ECP released gender-disaggregated turnout data for 270 national constituencies in Pakistan.⁶ This data allows us to construct measures of women's and men's turnout at the constituency level as it reports information on voter registration and votes cast for each constituency by gender. We also construct data that measures the number of male and female candidates who contested the 2018 General Elections in each constituency using the official candidate list released by the ECP. Together these two sources of data comprise the '2018 election data set'. As we are interested in analysing the determinants of women voter turnout in big cities, we need to define them and identify which constituencies are part of these cities. Our definition is based on the PSLM, which defines big cities as any city with a population greater than 500,000 and classifies 14 of Pakistan's cities in this category (see Annexe A, Table A.1). We use the ECP's constituency delimitation maps to identify constituencies that are part of these 14 cities and label these constituencies as 'big city constituencies'.

Since we are also interested in analysing the differences in the determinants of electoral turnout between big cities and rural areas, we need to define the universe of rural constituencies. In order to identify 'rural constituencies', we use data released by the ECP as Form 28, which lists the rural and/or urban census block that comprise every polling station within constituencies. Sixty-five per cent of the constituencies contain both rural and urban census blocks while the rest either only consist of rural census blocks and can be classified as purely 'rural' or are part of big city constituencies (see Annexe A, Table A2). For the rural–urban mix constituencies, we calculate the percentage of voters that reside in rural census blocks. The percentage of rural voters in these rural–urban mix constituencies varies between 37 per cent and nearly 100 per cent.

⁵ BFRS data set codes 28,731 incidents of political violence from 1988 to 2011 in Pakistan based on newspaper reports. More information on the data set is available at Bueno de Mesquita *et al.* (2013).

⁶ There are 272 national constituencies in Pakistan. Two constituencies were re-pollled hence, the electoral results of those two constituencies were not reported.

Using 50 per cent as the cut-off, we create the 'rural majority' subcategory by combining the rural–urban mix constituencies with greater than half of their registered voters living in rural census blocks with the 31 purely 'rural' constituencies identified through Form 28. For the purpose of our analysis, we consider these 167 'rural majority' constituencies as 'rural constituencies'.

The '2018 election data set' is merged with the PSLM data set, which is representative at the 'big city' level and at the district level for rural areas. Pakistan is constituted of four provinces: KPK, Baluchistan, Punjab and Sindh and some territories that are administered by the federal and provincial governments, such as the federally administered tribal areas (FATA) that lie along Pakistan's western border with Afghanistan. As the PSLM is only representative at the divisional level for areas in Baluchistan, we drop all 16 constituencies that are part of that province from our data set. Moreover, as the PSLM file does not have district representative data for all of the FATA districts, two districts in KPK and a district in Sindh, we also drop the 15 constituencies, which are part of these districts from our data set (see Annexe A, Table A3). The PSLM allows us to construct data on individual and household factors, and also allows us to construct a measure of ethnic heterogeneity at the level of big cities and rural districts. It is possible to construct these measures because the PSLM survey collects the following information at the respondent level: language spoken by the respondent, education level, women's decision-making within the household, and participation in the paid labour force. We are able to construct gendered measures for these variables because PSLM contains representative samples of men and women at the big city and the rural district level. This information is aggregated and weighted using the sampling weights at the big city and the rural district levels before the PSLM data set is merged with the '2018 election data set'. The PSLM data for big cities is merged with the election data set at the city constituency level to create the 'big city constituencies' data. An equivalent process is followed to create the merged 'rural constituencies' data. The details of the variable construction are given in section 4.2.

An important data limitation is that while a majority of constituencies in the '2018 election data set' are mixed, the PSLM is not representative of towns and small cities and is only representative of rural areas and big cities. As mentioned above, we address this limitation by restricting our data to only big city and 'rural majority' constituencies. However, we check for robustness by comparing the result of the 'rural majority' sample with the results obtained from two supra-majority rural constituency samples, which consist of mixed constituencies in a district where 67 per cent or more ('Supra-Majority I') or 75 per cent or more ('Supra-Majority II') voters are residing in rural census blocks. The details of the strategy are given in section 4.3.

Another important data limitation is that our independent variables come from the 2013–14 round of the PSLM survey, whereas the electoral data is for 2018. We could not use later rounds of the PSLM because the released data did not include a module on women's decision-making within the household. Neither could we use data from earlier elections because the ECP did not report gender-disaggregated data before the 2018 general election. Hence, our analysis makes the assumption of constant time trends of independent variables at the big city and rural district levels, which is not unreasonable as rural–urban differences in education level, household dependency ratios, labour force participation and women's decision-making power within the household are unlikely to change rapidly over short periods.

4.2 Variable construction

4.2.1 Women voter turnout

Women voter turnout, our main dependent variable, is calculated at the constituency level. Women voter turnout is the percentage of female registered voters who voted in the 2018 General Election in each constituency. Similarly, for men, we calculate the male voter turnout as the percentage of male registered voters who voted in the 2018 General Election in each constituency. It is important to recognise that this outcome measure calculates turnout among women and men who are registered to vote. Hence, it will not be affected by gender differences in registration rates.

4.2.2 Individual- and household-level determinants

Individual- and household-level covariates are calculated separately for men and women. They are aggregated at the constituency level for big cities and rural districts. Education is divided into the following categories: (i) no formal education; (ii) class 1 to 5; (iii) class 6 to higher secondary school; (iv) graduate or above. For each level, we calculate the percentage of individuals who are 18 or above and have attained these levels of education.

Labour force participation measures the percentage of individuals older than 18, who either actively engage in paid work (including through self-employment) or are seeking paid work. It is important to keep in mind that this indicator measures adult engagement in paid work and does not include involvement in unpaid or care work, which is consistent with the emphasis in the literature analysing the impact of labour force participation on political participation.

The dependency ratio calculates the ratio of individuals who are younger than 15 and older than 65 (dependents) to all adults in the 15–65 age bracket at the household level for the big city and rural district samples.

We use PSLM data to construct the 'women's empowerment index' using the inverse covariance weighting approach (Anderson 2008). This methodology has been widely used to calculate women's decision-making power within the household (Gottlieb and Robinson 2016; Khan 2017). The index is intended to capture decision-making power within the household and is constructed by combining questions about the degree of control a woman has over decisions concerning continuation of her education, entering jobs, and purchase of medical services and items such as food for the household. The index is created by dichotomising responses to each question and assigning a code of '1' if the response suggests that women are the sole decision makers or are involved in joint decision-making with their husbands or other family members, and assigning a code of '0' if they report being excluded from decision-making. Before the index is created each variable is standardised. All the sub-measures are positively correlated and the index has a Cronbach's alpha score $\alpha = 0.898$.⁷

4.2.3 Contextual determinants

The analysis focuses on the nature of electoral competition, linguistic fractionalisation and density of women candidates in an area as important contextual determinants. Electoral competition is measured using the effective number of parties index created by Laakso and Taagepera (1979). The formula used to construct the index is given below:

$$EffectiveNumberofPartiesIndex = \frac{1}{\sum_i^n p_i^2} \quad (1)$$

where p_i is the proportion of votes each candidate gets in each constituency. Higher values of the index indicate that effective competition exists between a greater number of parties. For example, an index value of 2.28 tells us that there are more than two, but definitely less than three major parties. We use linguistic fractionalisation as a proxy measure for ethnic composition of big cities and rural districts. We calculate linguistic fractionalisation using the same formula used to compute ethno-linguistic fractionalisation (ELF) in the literature (Alesina *et al.* 2003). Higher values indicate greater ethno-linguistic fractionalisation. We measure the density of women candidates at the big city and rural district levels by calculating the percentage of female candidates who ran in the 2018 General Election in each constituency.

⁷ Cronbach's alpha score measures the internal reliability and consistency of a measure. Higher values of the score indicate higher covariance of the sub-items.

4.3 Summary statistics

The summary statistics for women are given above and additional summary statistics for men and contextual variables are available in Annexe B. Table 4.1 confirms the findings of Figures 2.2, 2.3 and 2.4, that women in Pakistan's cities do better than their rural counterparts in terms of education, lower ratio of dependents in the household and greater decision-making power within the household. The table also confirms that in spite of doing better on these individual determinants women in big cities have much lower economic and political participation compared to rural women. Interestingly, with the exception of labour force participation, we find similar differences in terms of individual factors for men between big cities and rural districts (Table B1). In terms of contextual factors, big cities have a higher value of the effective number of parties index than rural areas (Table B2). Meaningful competition tends to exist between more than three parties in the average big city, whereas in rural areas it is between slightly less than three parties (Table B2). However, we do not find any significant difference between the two types of areas in terms of ethnic heterogeneity and the density of women political leaders who contest elections (Table B2).

Table 4.1 Summary statistics for individual-level determinants of political participation – women sample

	Rural majority	Big city	Diff.	Std. error
Voting turnout-GE 2018	49.50	41.00	8.50***	1.52
No formal education	73.63	35.89	37.75***	1.98
1 to 5 class	12.19	11.98	0.21	0.80
6 to high school	12.07	39.31	-27.24***	1.21
Graduate or above	2.11	12.83	-10.71***	0.45
Labour force participation	32.65	13.38	19.28***	2.42
Women's empowerment Index	0.05	0.27	-0.21***	0.07
Dependency ratio	1.17	0.81	0.36***	0.02

Notes: The table presents summary statistics for the constituency-level merged data set, which is used for our analysis. Total constituencies: 241; rural majority constituencies: 169; big city constituencies: 63.

Source: Authors' own, based on data constructed by the authors using gender-disaggregated data released by the Election Commission of Pakistan and PSLM 2013–14

4.4 Empirical strategy

We use the following equation to estimate the association between individual, household, and contextual factors and women's electoral turnout in big cities and rural areas respectively:

$$WomenVoterTurnout_i = \beta_1 + \beta_3 X_i + \beta_4 J_i + \epsilon_i \quad (2)$$

where i denotes the electoral constituency in the 2018 General Election, the dependent variable $Women\ Voter\ Turnout_i$ measures women's turnout in constituency i ; X_i is a vector of observed individual and household covariates, which include women's education and labour force participation, women's decision-making power in the household, and the household dependency ratio, and J_i is a vector of observed contextual covariates, which includes the index of effective number of parties, linguistic fractionalisation and the percentage of female candidates who contested the 2018 General Election. The idiosyncratic error term is assumed to be uncorrelated with all the other right hand side variables.

As we are interested in analysing the differences in determinants of turnout in big cities and rural areas, we run equation (2) on the following three 'rural' classifications: (1) rural majority, (2) rural supra-majority I, (3) rural supra-majority II.

We also run similar specifications using men's turnout as the dependent variable, to estimate the association between individual, household, and contextual covariates and men's electoral participation. The purpose of estimating these specifications is to understand whether the factors that are catalysing or constraining women's turnout in the big city context apply to both genders or only impact women.

5. Results

5.1 The role of individual, household, and contextual factors as determinants of women's turnout in Pakistan's big cities and rural areas

This section presents the results of the association between electoral turnout and individual, household, and contextual factors in big cities and rural areas. Table 5.1 shows separate specifications for rural areas and big cities and Table 5.2 shows the separate specifications for supra-majority areas.

Women's turnout is positively associated with women's educational attainment in big cities but not in rural areas. As shown in Table 5.1, column 3, we observe this positive association in big cities for educational attainment at all levels from primary schooling to college education. We find, for instance, that a 1 per cent increase in women's primary schooling attainment in big cities is associated with a 1.7 per cent increase in their turnout. This suggests that in line with the literature on mature democracies, rising educational attainment maybe a potential pathway for increasing women's political participation in Pakistan's big cities. However, we do not see a similar significant association between women's educational attainment and turnout in rural areas. This may be because the quality of education is lower in rural areas, preventing it from accruing similar benefits. Taken together these findings do not provide support for theories of clientelist mobilisation, which suggest that patronage networks seek to mobilise illiterate voters (Brusco, Nazereno and Stokes 2004; Blaydes 2006; Stokes 2005).

We do not find an association between women's labour force participation and their turnout in big cities. This suggests that there is little or no complementarity between the two forms of participation in Pakistan's big cities, and labour force participation is not giving women the resources and networks needed for political participation. Interestingly, there is a positive association between the two forms of participation in rural areas. This positive association not only remains robust after we restrict the sample to 'rural supra-majority I' and 'rural supra-majority II' areas but also increases in magnitude (Table 5.2, columns 1 and 3). This could indicate that women's labour force participation in rural areas helps provide necessary resources and networks that can support women's political participation, alternatively it could be capturing targeted clientelist mobilisation by politicians of women who are trapped in low wage rural jobs.

Table 5.1 Determinants of political participation in rural majority areas and big cities

	Rural majority		Big cities	
	Female turnout	Male turnout	Female turnout	Male turnout
	(1)	(2)	(3)	(4)
1 to 5 class	0.08 (0.20)	0.11 (0.14)	1.76*** (0.29)	0.30 (0.36)
6 to high school	0.23 (0.19)	-0.03 (0.06)	0.50** (0.15)	-0.19 (0.26)
Graduate or above	0.18 (0.41)	-0.43 (0.22)	0.96*** (0.22)	-0.11** (0.45)
Women's empowerment index	4.66* (2.26)		-5.52 (2.86)	
Labour force participation	0.28*** (0.06)	0.15 (0.14)	0.14 (0.11)	0.63* (-0.23)
Dependency ratio	-26.81*** (6.28)	-9.13* (4.04)	16.51 (20.38)	-21.35 (17.53)
Effective Number of Parties Index	0.35 (1.89)	2.73 (2.07)	-2.52** (0.64)	-1.85 (1.00)
Percentage of female candidates	0.16* (0.07)	0.07 (0.07)	-0.02 (0.04)	-0.00 (0.07)
Linguistic fractionalisation	-1.84 (5.72)	1.71 (3.38)	3.23 (7.44)	7.55 (5.38)
Constant	65.63*** (10.33)	48.06** (16.47)	-18.19 (25.09)	135.02** (43.29)
Observations	169	169	63	63
R2	0.515	0.206	0.804	0.764

Notes: All specifications show results using OLS estimation. Standard errors in parentheses are clustered at the district level. Rural majority refers to constituencies with greater than 50 per cent of total registered voters living in rural areas. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own, based on data constructed by the authors using gender-disaggregated data released by the Election Commission of Pakistan and PSLM 2013–14

Unlike the findings in the literature, we find a weak positive statistical association between women's empowerment and their electoral turnout in rural areas that is not robust across specifications. The positive association between these variables found in the 'rural majority' sample becomes insignificant once we restrict our sample to 'rural supra-majority I' and 'rural supra-majority II' areas. Surprisingly, in big cities, where on average women's empowerment index scores are higher than rural areas, we do not find any significant association between women's empowerment and turnout.

Table 5.2 Determinants of political participation in rural supra-majority areas

	Rural supra-majority I		Rural supra-majority II	
	Female turnout (1)	Male turnout (2)	Female turnout (3)	Male turnout (4)
1 to 5 class	0.17 (0.21)	0.17 (0.15)	0.02 (0.21)	0.04 (0.15)
6 to high school	0.28 (0.21)	-0.03 (0.06)	0.26 (0.22)	-0.09 (0.05)
Graduate or above	0.09 (0.43)	-0.32 (0.24)	0.20 (0.46)	-0.36 (0.26)
Women's empowerment index	3.52 (2.53)		4.60 (2.89)	
Labour force participation	0.32*** (0.07)	0.17 (0.15)	0.32*** (0.07)	0.16 (0.15)
Dependency ratio	-28.32*** (6.61)	-10.50* (4.14)	-32.28*** (7.08)	-12.89** (4.73)
Effective Number of Parties Index	0.13 (1.90)	2.70 (2.19)	0.64 (2.27)	2.83 (2.67)
Percentage of female candidates	0.13 (0.08)	0.06 (0.08)	0.18 (0.10)	0.07 (0.10)
Linguistic fractionalisation	-1.84 (6.08)	0.70 (3.46)	-4.48 (6.71)	0.10 (3.81)
Constant	66.21*** (11.08)	46.26** (17.32)	71.26*** (11.84)	55.09** (17.82)
Observations	150	150	127	127
R2	0.543	0.209	0.568	0.211

Notes: All specifications show results using OLS estimation. Standard errors in parentheses are clustered at the district level. Rural supra-majority I refers to constituencies with greater than 67 per cent of total registered voters living in rural areas; rural supra-majority II refers to constituencies with greater than 75 per cent of total registered voters living in rural areas. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own, based on data constructed by the authors using the gender-disaggregated data released by the Election Commission of Pakistan and PSLM 2013–14

Our next result pertains to the relationship between women's political participation and the burden of care work. We find the predicted negative association between the household dependency ratio and women's turnout in rural areas. This is consistent with theories which argue that a combination of larger households and entrenched gender roles increases the burden of unpaid care work on women, which constrains them in terms of time and resources needed to participate in elections (Burns, Verba and Schlozman 1997; Iversen

and Rosenbluth 2006; Iversen and Rosenbluth 2010). However, we find a positive and insignificant association between these two factors in big cities, which suggests that the reduced burden of care work within the household maybe an insufficient catalyst for participation in politics.

With the exception of the number of dependents per breadwinner in rural areas, the covariates that are significantly associated with women's turnout (Table 5.1, columns 1 and 3) do not have a significant correlation with men's turnout (Table 5.1, columns 2 and 4). This suggests that these associations are only relevant for women's turnout. It is important to note even the association of the dependency ratio and turnout is gendered in nature as the strength of the negative association is three-times in magnitude for women in comparison to men.

Overall, barring education these results do not provide support for factors emphasised in the literature as catalysts of women's participation in Pakistan's big city context. This suggests that we need to look at other factors to find an explanation for women's lower turnout in big cities.

In terms of contextual factors, we find that the effective number of parties index is negatively associated with women's turnout in big cities, although it has no association with turnout in rural areas. Higher levels of partisan competition appear to dampen women's turnout in big cities. This suggests that it may be important to analyse the nature of the engagement between political parties and women voters in big cities and rural areas.

5.2 Differences in engagement between women voters and political parties in big cities and rural areas

Is women's lower electoral participation in big cities mirrored by weaker engagement between them and political parties in these contexts compared to rural areas? This is an important question because political parties play a critical role in mobilising voters.

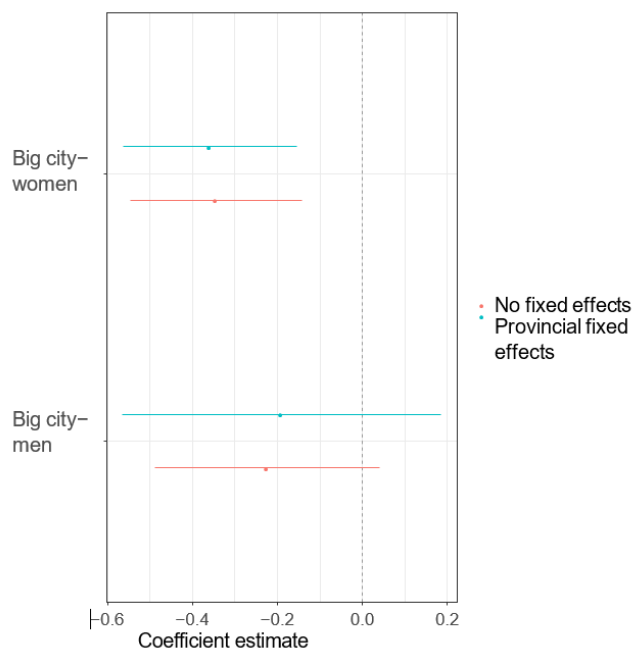
We answer this question using data from the Herald-SDPI national public opinion survey⁸ conducted with 6,004 randomly chosen respondents in 55 districts across Pakistan in the run up to the 2018 General Election. We use post-stratification to create 'big city' and 'rural' strata using inverse probability weighting (see Annexe D for details). The survey was fielded to both men and women respondents and, among other things, asked a set of questions about respondents' contact with political parties at the time of elections and with regard

⁸ The survey was designed by authors Cheema and Liaqat and conducted monthly by Herald and the Sustainable Development Policy Institute (SDPI).

to job and public service delivery issues. We use these questions to analyse whether a gap exists in women's engagement with political parties between big cities and rural areas. We also analyse whether a similar engagement gap exists for men.

Figure 5.1 shows that the contact between political parties and women around electoral mobilisation is much stronger in rural areas (represented by the dotted line) compared to big cities. The figure shows the mean changes in political worker contact in big cities from that in rural areas, estimated using weighted regressions both with and without provincial fixed effects. Interestingly there is no significant difference between the two areas in the strength of engagement between political parties and men in relation to the mobilisation of votes. The weaker engagement between party workers and women in big cities around mobilising votes could be an important reason for women's lower electoral participation in this context.

Figure 5.1 Party worker contact before elections



Source: Authors' own, based on Herald-SDPI national public opinion survey

Weaker electoral mobilisation of women by political parties appears to be a consequence of weakening clientelist linkages between households and parties in big cities. The strength of contact between political parties and citizens related to public services and the provision of jobs is a core feature of clientelist mobilisation (Kitschelt and Wilkinson 2007; Stokes 2005; Stokes *et al.* 2013).

Another core feature of clientelist mobilisation in South Asia is the organisation of collective voting blocks by community level political entrepreneurs and by local

political party leaders (Khan-Mohmand 2019; Prillaman 2018). Recent data from Pakistan shows that women are much more likely to vote as part of a voting block in rural areas compared to big cities. Survey data⁹ from the rural areas of Sargodha district in Punjab, Pakistan shows that nearly 61 per cent of women voters vote as members of voting blocks (Liaqat *et al.* 2019). Evidence from Sargodha shows that the votes of three-quarters of these voters are organised by male members of their families and another one-fifth are organised by male leaders of kinship groups. However, evidence from the metropolitan city of Lahore in Punjab shows that a majority (54 per cent) of women voters do not report participating in voting blocks (Cheema *et al.* 2019a, 2019b). This is further indicative evidence of weakening clientelist linkages between political parties and women voters in big cities. In rural areas, women's votes appear to be collectivised by male members of their family or their kinship groups as part of clientelist mobilisation by political parties, which is similar to forms of mobilisation found in rural India (Prillaman 2018). However, the evidence from big cities suggests a weakening of clientelist linkages between parties and households as well as a weakening of male coordinated collective voting by women. The reduced mobilisation effort by political parties and clientelist networks in big cities compared to rural areas may be an important reason for women's lower electoral turnout in this context. These results also caution us against using the higher turnout of rural women as an indicator of political empowerment.

5.3 Political violence and women's political participation in big cities

The recent literature on politics in Pakistan emphasises the significance of political violence as an important contextual factor. We could not test the importance of this factor in the main analysis because we lack comprehensive data on this variable for rural districts. We ran tests on more limited data to explore the role of political violence as a correlate of women's electoral participation in Pakistan's big cities because data exists at the big city level.

Shapiro and Gulzar's (2012) analysis (based on the BFRS data for Pakistan) shows that incidents of political violence increased three-fold between 2001 and 2010. They find that the four provincial capital cities emerged as hotspots of different types of political violence during this period. Although incidents of violence have decreased substantially since 2012 (Makisaka and Chingchit 2017), nonetheless it is important to analyse whether exposure to a history of high levels of political violence is associated with lower turnout among women in Pakistan's big cities.

⁹ From a sample of 2,970 respondents comprising a random sample from 84 Union Councils. The sample consists of a randomly sampled man and a randomly sampled woman from each household.

We analyse the association between a history of exposure to violence and women's electoral participation in big cities using the following formula:

$$WomenVoterTurnout_{bc} = \beta_1 + \beta_2 ViolenceScoreIndex_{bc} + \beta_3 X_{bc} + \beta_4 J_{bc} + \epsilon_{bc} \quad (3)$$

Where *bc* stands for big city constituencies in the 2018 General Election, the dependent variable (*Women Voter Turnout_{bc}*), the vectors of individual and household covariates (*X_{bc}*) and the contextual covariates (*J_{bc}*) are the same as the ones used in formula 2 above. The main differences with the earlier formula are that this analysis is restricted to the big city sample and it includes the *Violence Score Index_{bc}* as the explanatory variable of interest. As before, we also run the same formula for men's turnout to assess whether the effect of violence on electoral participation is gender-specific or not.

The Violence Score Index is created from the BFRS data set on political violence in Pakistan (Bueno de Mesquita *et al.* 2014). The BFRS data set encodes political violence in cities using violent occurrences reported in newspapers. The data set has information on the number of incidents, casualties and type of political violence at the city level from 1998 to 2011. We calculate a Violence Score Index, for each big city, using the Global Terrorism Index (GTI) methodology created by the Institute for Economics and Peace.¹⁰ A weighted sum of the number of incidents, casualties and fatalities is created for each big city for each year using the BFRS data set. The Violence Score Index is a standardised, weighted average of the years 2007–11. We use a five-year weighted average, as the aim is to estimate the association with a history of exposure to violence. The details of the index are available in the Annexe C.

Table 5.3 presents the results for women and men's electoral turnout with and without controlling for individual and contextual covariates. We find that the Violence Score Index is negatively correlated with both men and women's turnout in big cities, and for women, the association remains significant even after we control for the vector of covariates. This is suggestive that exposure to a history of political violence has a significant negative association with women's turnout in Pakistan's big cities.

¹⁰ [Details of the GTI Index](#), Vision of Humanity website.

Table 5.3 Big cities, violence, and political participation PSLM 2013–14

	Female turnout in 2018 GE		Male turnout in 2018 GE	
	(1)	(2)	(3)	(4)
Violence Score Index	-0.61*** (0.11)	-0.33* (0.14)	-0.74*** (0.07)	-0.64 (0.34)
Individual-level determinants	No	Yes	No	Yes
Contextual determinants	No	Yes	No	Yes
Observations	63	63	63	63
<i>R</i> ²	0.380	0.826	0.720	0.801

Notes: All specifications show results using OLS estimation. Standard errors in parentheses are clustered at the district level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Authors' own, based on data constructed by the authors using gender-disaggregated data released by the Election Commission of Pakistan, BFRS Political Violence in Pakistan data set and PSLM 2013–14

6. Limitations and conclusion

To our knowledge this is the first empirical paper to show that the big city context can inhibit rather than enable women's political participation. We deal with a puzzle, despite doing well on a range of social indicators that the literature suggests should lead to an increase in women's political participation, women in Pakistan's big cities participate at significantly lower levels than their counterparts in rural areas. We do not find an association between women's electoral participation in big cities and any of the individual, household, or contextual factors, apart from education, that the literature considers as important catalysts of participation.

These findings suggest that analysing the constraints to women's political participation in a big city context is an extremely important area of future work in comparative politics. A limitation of the study is that it restricts itself to using electoral turnout as a measure of women's political participation. There is a need to supplement turnout with more substantive measures of women's political empowerment including running for public office and the ability to hold public office holders accountable. There is also a need to rigorously establish that the correlations identified in this paper reflect causal relationships. We find that analysing the causes that are resulting in tenuous linkages between political parties and women citizens in big cities is a fruitful line of future inquiry that may explain their lower participation in big cities. We also find that it is important to analyse the channels that explain the negative association between political violence and women's political participation in big cities.

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Annexe A

List of big cities in Pakistan

Karachi
Lahore
Faisalabad
Rawalpindi
Gujranwala
Peshawar
Multan
Hyderabad
Islamabad
Quetta
Bahawalpur
Sargodha
Sialkot
Sukkur

Table A1 Big city, rural, and mixed constituencies

	Category									
	Rural		Big city		Mixed rural majority		Mixed urban majority		Total	
	No	Row%	No	Row %	No	Row %	No	Row %		No
Balochistan	1	6.7	0	0.0	14	93.3	0	0.0	15	
KPK	15	29.4	4	7.8	31	60.8	1	2.0	51	
Punjab	15	10.4	36	25.0	86	59.7	7	4.9	144	
Sindh	0	0.0	24	39.3	36	59.0	1	1.6	61	
Total	31	11.4	64	23.6	167	61.6	9	3.3	271	

Notes: There is one purely urban constituency in Balochistan, which has not been reported. Mixed rural majority are constituencies, which have greater than half of their total registered voters residing in rural areas; mixed urban majority are constituencies, which have less than half of their total registered voters residing in rural areas.

Source: Authors' own, based on data constructed by the authors.

Table A2 List of dropped constituencies

Province	Number of constituencies
FATA	40
FATA	41
FATA	42
FATA	43
FATA	44
FATA	45
FATA	46
FATA	47
FATA	48
FATA	49
FATA	50
FATA	51
SINDH	231
KPK	12
KPK	13

Source: Authors' own

Annexe B

Table B1 Summary statistics for individual-level determinants of political participation – male sample

	Rural majority	Big city	Diff.	Std. error
Voting turnout-GE 2018	57.40	53.90	3.50***	1.06
No formal education	43.02	21.00	22.02***	1.75
1 to 5 class	18.21	13.27	4.94***	0.69
6 to high school	34.35	49.86	-15.51***	1.67
Graduate or above	4.43	15.88	-11.45***	0.52
Labour force participation	83.42	82.42	1.00	0.91
Dependency ratio	1.17	0.81	0.36***	0.02

Notes: The table presents summary statistics for the constituency level merged data set, which is used for our analysis. Total constituencies: 241; rural majority constituencies: 169; big city constituencies: 63.

Source: Authors' own, based on data constructed by the authors using gender-disaggregated data released by the Election Commission of Pakistan and PSLM 2013–14

Table B2 Summary statistics for contextual determinants of political participation

	Rural majority	Big city	Diff.	Std. error
Linguistic fractionalisation	0.19	0.20	-0.02	0.03
Percentage of female candidates	5.65	6.58	-0.93	1.12
Effective Number of Parties Index	2.91	3.36	-0.46***	0.13

Notes: The table presents summary statistics for the constituency level merged data set, which is used for our analysis. Total constituencies: 241; rural majority constituencies: 169; big city constituencies: 63.

Source: Authors' own, based on data constructed by the authors using gender-disaggregated data released by the Election Commission of Pakistan and PSLM 2013–14

Annexe C

Violence Score Index

A Violence Raw Score is created for each date in the data set for every city using the formula given below:

$$\text{Violence Raw Score}_{ic} = (1 \times X_{ic}) + (3 \times L_{ic}) + (0.5 \times M_{ic}) \quad (1)$$

X_{ic} denotes the number of incidents on date i in city c , L_{ic} the number of people killed on date i in city c and M_{ic} , is the number of people injured on date i in city c .

A five-year weighted average of the Violence Raw Score for each city is created using the following year weights:

Table C1 Year weights

Year	Weights
2011	16
2010	8
2009	4
2008	2
2007	1

This weighted average is standardised to create the Violence Score Index.

Annexe D

Sampling weights and post-stratification

Stratification

For the purpose of our analysis, we create two ex-post strata: 'big city' and 'rural'. Our 'big city' strata contains the following metropolitan cities: (1) Lahore (2) Hyderabad (3) Karachi (4) Peshawar. Our sampling strata included cities like Multan, Faisalabad, Gujranwala, Rawalpindi, which contained a mix of 'rural' and 'urban' areas. While re-sampling, we exclude these cities from the 'big city' strata. We classify the remaining 38 districts in our sample to the 'rural' strata.

Sampling weights

We use a two-stage weighting methodology to weight our sample using inverse probability weighting.

First stage weighting

For the first stage, we account for the creation of the 'big city' strata. We use inverse probability weights of selection in the strata and also account for probability of selection in the sample using the following formula:

$$\text{Strata Weight} = \frac{1}{P(X) \times P(Y) \times P(Q)} \quad (1)$$

$P(X)$ denotes the probability of selection in the strata, $P(Y)$ the probability of selection in the district population and $P(Q)$, denotes the probability of selection of the constituency.¹¹

Second stage weighting

In order to be representative of the education levels at the district level, we adjust our first stage weights by using inverse probability weights for district level education accounting for gender proportions using statistics from the latest Pakistan Bureau of Statistics reports.

¹¹ To draw the sample of 6004, 85 National Assembly constituencies out of a total of 272 in Pakistan, were randomly selected.

We use the following formula:

$$\text{Strata Weight Adjusted} = \text{StrataWeight} \times \frac{\Lambda}{\gamma} \quad (2)$$

Λ denotes the aggregate district education level and γ the education levels in the sample.

Table D1 shows that most of the sampling weights lie less than one standard deviation off the mean of the sampling weight.

Table D1 Distribution of sampling weights

	25th Percentile	Median	Mean	75th Percentile	SD	Min	Max
Strata weights	109080.7	242132.3	317315.2	375323.9	442016.6	13329.12	3673708

Source: Authors' own, based on Herald-SDPI national public opinion survey



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