

# Tokenism or Agency? The Impact of Women's Reservations on Panchayats in South India

Radu Ban

London School of Economics and World Bank

Vijayendra Rao

Development Research Group, World Bank

March 2006

## Abstract

There is increasing interest in whether improving the participation of women in government will lead to more gender equality. We test this with data collected from South India, using a natural experiment that randomly reserves 1/3rd of all presidencies in democratically elected village councils (panchayats) for women candidates. Previous research has found that such "reservations" result in policy decisions that are closer to the preferences of women, while qualitative research has argued, conversely, that it results in token appointments where women are appointed by elites, and are poorly educated and aged. We do not find evidence in favor of the tokenism hypothesis, finding that women leaders are drawn from the upper end of the quality distribution of women. However, we find that female leaders perform no differently than male leaders and are no more likely to make decisions that favor women's concerns. Our results also indicate that institutional factors matter much more for women than for men - women perform better than men in situations where they have more political experience, live in villages less dominated by upper castes, and in states where the panchayat system is more mature.

---

We are very grateful to the Research Committee and the South Asia Rural Unit of the World Bank for financial support. Additional budget support was provided by the World Bank Institute via a Dutch Government trust fund. Jillian Waid provided excellent research assistance. Valuable comments were provided by Tim Besley, Rohini Pande and seminars at HEC-Montreal and the World Bank. The views in this paper are exclusively those of the authors and not necessarily shared by the World Bank, or its member countries.

# 1 Introduction

The link between democracy and development is increasingly being emphasized by influential scholars (Sen 1999[16]), development institutions (World Bank 2005[22]) and western governments. In particular, enhancing the participation of women within democracies is seen as central to improving governance (World Bank, 2001[20]). George Bush, for instance, said in a speech in March 2006 that democracies reach their potential when women are allowed to participate fully (Washington Post, March 6, 2006). India offers, perhaps, the best opportunity to learn about the impact of raising the participation of women in democratic institution because of a remarkable attempt to improve the representation of women in local village government. The 73rd amendment to the Indian constitution, passed in 1992, mandated that no less than a third of the total number of seats in village governments (panchayats), and no less than a third of the office of Chairperson of the panchayat should be reserved for women. The aim of this was to ensure that women would have a voice in local government and, ultimately, help facilitate the formation of a more gender equal society. Since every Indian village is now required to participate in this exercise - the enormous variation and diversity among villages in India provide a remarkable laboratory to test models of democratic reform.

There has been a lot of speculation, and some anecdotal evidence, on how well this policy has worked. These can be classified into four broad categories – we will label them “pessimistic” and “optimistic”:

Pessimistic:

1) That women who stand for elections in reserved constituencies would be tokens of powerful interests in the village. Poorly educated, elderly women from impoverished, easily manipulated, families would be picked by elites to run (e.g. Ramesh and Ali, 2001 [15]),

2) A variant of 1) saying that the women would instead be poorly educated but picked from the same wealthy, powerful families as the existing political elite and would, therefore, serve the interest of the elite.

Optimistic:

3) Effective, educated women would choose to run for elections, and would serve to represent the interests and preferences of women.

4) That women, because they are newcomers to the political process, would be more enthusiastic and less corrupt and therefore more effective than entrenched male politicians. They would therefore generally improve the quality of governance (e.g. Vyasulu and Vyasulu, 1999 [19])

Econometric work by Chattopadhyay and Duflo (2004b[8]) - henceforth CD - looking at panchayats in the states of West Bengal and Rajasthan examined these issues in some detail and found some evidence consistent with the optimistic hypothesis: Women leaders tend to invest more in goods where women have expressed a preference, and less in goods preferred by men. Specifically, women leaders in West Bengal tend to invest more in water and road projects, and less in non-formal education, while in Rajasthan they invest more in water and less in roads. CD are able to identify the causal impact of reservations since they establish that reservation status is rotated among all GPs on a random basis – which allows the reservation process to be treated as a randomized trial.

While CD's results convincingly demonstrate the effectiveness of the panchayat reservations experiment, the results are restricted to two states, Rajasthan and West Bengal, of a very large and diverse country. These states, both from the north, are among the most male-biased in the country: Rajasthan ranks 21st and West Bengal 18th out of 24 states in a composite index of the status of women in India (Filmer, King and Pritchett 1998 [12]). Thus, a question remains of how applicable these results are to the rest of the country.

CD find that women presidents<sup>1</sup> in reserved constituencies tend to be worse educated than presidents (almost all men) in unreserved constituencies, a fact that they attribute to the possible existence of tokenism. This, however, begs the question of whether this gender differential in education reflects patterns in the general population or is a consequence of the reservations system. It also raises an important secondary question of whether the quality of presidents matters more in reserved panchayats; do better educated women function more effectively as presidents?

More recent work by Duflo and Topalova (2004[11]) and by Bardhan, Mookherjee, and Torrado (2005[1]) also analyze empirically the effect of women's reservation. Duflo and Topalova extend the CD findings to 24 states and examine whether the performance of women leaders are perceived differently than men. The authors find that women's reservation leads to more and better drinking water facilities in the village, although the quality effect is not significant. For other public goods they find no significant effect of women's reservation. They also find that villagers are less likely to pay bribes in GPs reserved for women. However, the villagers' satisfaction

---

<sup>1</sup>In West Bengal, village presidents are called "pradhans" and this is the term used throughout CD. However in the Southern Indian states which are the setting for our study, they are called "sarpanch" or president. We will henceforth call them president.

with the president's performance is lower in GPs reserved for women. Furthermore, women get less "credit" for quantity and quality improvements than men. Bardhan et al. examine the effect of women's reservation on the targeting of various local programs. They find that women's reservation improves the targeting of subsidized loans to disadvantaged groups but at the same time, worsens the targeting of employment grants.

The impact of women politicians is also examined by Clots-Figueras (2005[10]). The author looks at women's political behavior as state legislators. She finds that women legislators elected in seats reserved for Scheduled Castes/Tribes are more likely to adopt women-friendly laws, relative to women elected in open seats.

Another important issue, a major theme in the "action research" literature, is the salience of local structures of inequality and power (e.g. Rai et al. 2001, Chp. 5 [14]) Villages dominated by powerful caste groups tend to be much more dictatorial. Thus, when such villages are reserved for women one expects that the presidents would be more likely to be subservient to elites. This raises the question of whether local structures of oligarchy and inequality have more influence over women presidents. Bardhan, et al. find that the effect of women's reservations on targeting is indeed lower in villages with higher land inequality.

An evaluation of the effects of reservations for women must include both evidence on the process by which women are selected in reserved constituencies, and on how their performance compares with leaders in unreserved ones. The three other papers on women's reservation cited above only address the performance comparison. Besley, Pande and Rao (2005 [4]) focus on the political economy of politician selection using the same data as ours. In examining the broader issue of political selection, they show that more educated and politically connected individuals are more likely to get elected, but this relationship does not hold in constituencies reserved for women.

In this paper we connect these two literatures by conducting a more detailed analysis of political selection in constituencies reserved for women, and examining the impact of women's reservation on performance. We find that there is less evidence in support of the tokenism hypothesis. Women leaders tend to be picked from among more politically knowledgeable and wealthier women. Panchayats led by women are no worse or better in their performance than those with male leaders, and women politicians do not make decisions in line with the needs of women. Importantly, however, political experience enhances the performance of women leaders more than it does for men, women in villages which are less dominated by upper castes, and in states that have relatively mature panchayat systems, perform better

than men. This suggests that institutional factors affect women politicians more than they affect men.

Our data, from a survey conducted between November and December 2002, is from the southern states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu, is interesting for two reasons: First in contrast to West Bengal and Rajasthan, these states have low levels of gender disparity compared to the rest of the country – with Kerala ranked on the top of all major Indian states on the status of women index (Filmer, King, Pritchett 1998 [12]). Thus comparing the CD paper with these results could provide some valuable insights into how women’s reservations works within relatively more gender-equal societies.

Second the four states present an interesting comparison within themselves in their approach to decentralization: Kerala and Karnataka have been among the leaders in promoting village democracy in India. Karnataka has had women’s reservations in place since 1959, and in 1983 it passed landmark legislation giving panchayats a streamlined organizational structure that served as a model for the 73rd amendment. Kerala has had a more checkered history, but was one of the first states to adopt and implement the 73rd amendment. This has been followed by a commitment to give panchayats meaningfully large budgets and the power and authority to make decisions. Andhra Pradesh on the other hand, despite a long history of panchayat legislation has not had regular elections. Moreover, since 1997 the state government also instituted a system of “participatory governance” that served to undermine the authority of panchayats<sup>2</sup>. Tamil Nadu, similarly, has instituted reforms from the 73rd amendment but without giving village panchayats much teeth with budgets and placing most of the decision making at higher levels of government. The four states thus provide an interesting contrast to study the impact of the 73rd amendment<sup>3</sup>.

## 2 Data

### 2.1 Sampling Strategy

Our sample consists of 523 villages in the four states and about 5000 households within them. Details of the sampling strategy are available in Besley

---

<sup>2</sup>Since 2005, a newly elected government in the state is attempting to shore up the authority of panchayats.

<sup>3</sup>See (Matthew and Buch, 2000 [13]) for a detailed account of the history of panchayats at the state level.

et al (2004)[3]. We selected, using a strategy designed to control for path-dependencies and cultural factors while making state comparisons, two districts in AP – Medak and Chithoor, three in Karnataka – Bidar, Kolar and Dakshin Kanada, two in Kerala – Kasargod and Palakkad, and two in Tamil Nadu – Dharmapuri and Coimbatore. The districts within states were selected, with one exception, to focus on those that had belonged to the same administrative unit during colonial rule, but had been transferred to different units when the states were reorganized in 1956<sup>4</sup>. From these states, pairs of blocks (which are the next level of administrative unit) one from each state were selected to be similar on the language spoken by a majority of the population. All blocks from within the sampled districts are chosen to be the closest possible in their majority language to a block in the matching district of the neighboring state. Since language is a good proxy in these regions for cultural differences given the prevalence of caste and linguistic endogamy, language matching allows us to partially control for "unobservable" sociocultural differences.

The blocks are divided into several Gram Panchayats (henceforth GPs) or village government units – each of which consist of between 1 and 6 villages depending on the state. From each sampled block, in the states of AP, KA and TN, we randomly sampled 6 GPs in every block. In Kerala the population per GP is roughly double that in the other three states. For this reason in Kerala we sampled 3 GPs in every block. This procedure gave a total of 201 GPs. From these we selected a village sample. In AP, Karnataka and Tamil Nadu we sampled all villages if the GP had 3 or fewer villages. If it had more than three villages, then we selected the president’s village and randomly selected two other villages. We excluded all villages with less than 200 persons from our sampling frame. All hamlets with population over 200 were considered as independent villages in drawing the sample. In Kerala we directly sampled wards instead of villages (as villages in Kerala tend to

---

<sup>4</sup>These are the districts of Bidar and Medak from the erstwhile state of Hyderabad, now in Karnataka and AP respectively, Pallakad, Coimbatore, Kasargod, Dakshin Kanada, Dharmapuri, and Chithoor, all from erstwhile Madras state and now in Kerala, Tamil Nadu, Kerala, Karnataka, Tamil Nadu and AP respectively. Since Bidar and South Kanara district in Karnataka are "special" in that they represent the worst and best districts in the state in development indicators, we also sampled Kolar district which is the one exception to the block matching rule in our sample. Kolar was a part of erstwhile Mysore state the precursor to modern Karnataka and thus does not follow the colonial-rule matching process described above. However, adding it does allow for more variation when we compare the other three states with Karnataka. Furthermore, Kolar has common borders with both Chithoor in AP and Dharmapuri in TN - which allows for a three part comparison within the same geographic area.

be very large) – we sampled 6 wards per GP. This gave us a final village sample size of 527 villages<sup>5</sup>. For sampled villages, any associated hamlets were also included as part of the sample.

From every sampled block in AP, KA and TN we randomly selected 3 of our 6 sampled GPs and conducted household interviews in all sampled villages falling in these GPs. In Kerala we randomly selected 2 GPs in one block and one GP in the other block (the selection of which block to sample how many GPs from was also random), and within sampled GPs we conducted household interviews in all sampled wards. Overall this gave us a final sample size of 5180 households<sup>6</sup>. Twenty households were sampled at random from every selected village<sup>7</sup>, of which four always belonged to Scheduled Caste or Tribes (henceforth SC/ST – who benefit from affirmative action programs mandated by the Indian constitution). In addition to these randomly sampled household the President of the GP – the president – was also subjected to a household interview with some supplementary questions. Thus our sample of presidents coincides exactly with the GPs. presidents were not available for interviews in a few of our GPs – so our final president sample is reduced from 201 to 192.

## 2.2 Questionnaires

Data was collected at the village, president and household level. At the village a questionnaire was administered using Participatory Rapid Appraisal (PRA) techniques (Chambers 1997[6]) to a group of men selected to represent different groups in the village, to assess their views on problems in the village, the work done by panchayat, and obtain measures of inequality and oligarchy. In addition PRA techniques were also employed on a group of selected women to get measures of women’s preferences on problems faced by the village. A facilities assessment was conducted by an investigator devoted to the task of looking at the quality of schools, clinics, roads, drinking water, and sanitation. We also obtained secondary data from the 1991 census of India for the villages in our sample.

---

<sup>5</sup>The state-wise break up is AP: 69 villages, KA: 182 villages, KE: 126 wards; TN 129 villages.

<sup>6</sup>Number of villages for household sample were: AP: 32 villages, KA: 90 villages, KE 66 villages, TN 71 villages.

<sup>7</sup>The survey team leader in every village walked the entire village to map it and identify total number of households. This was used to determine what fraction of households in the village were to be surveyed. The start point of the survey was randomly chosen, and after that every Xth household was surveyed such that the entire village was covered (going around the village in a clockwise fashion with  $X = \text{Number of Households}/20$ ).

In addition to this village level data, one randomly chosen adult from every household in the sample was asked questions on the household's socioeconomic status, household structure, views and use of public services in the village, private government benefits. They were also asked to rank-order problems in the village. Since the sample is divided between male and female respondents this provides yet another source of information on gender differences on preferences about village problems. All presidents in the sampled GPs had to answer the household questionnaire, but were also asked a series of questions to assess their knowledge about the political process – such as the names of prominent elected officials and reservation rules.

### **2.3 Reservation process**

All GPs within a block are selected for women's reservation by rotation, with a third of all GPs mandated to be reserved for women presidents at any given time. The method of rotation varies across states and is determined by the state's election laws. Typically a list of GPs is prepared for each block – ordered by the proportion of women in the population, and the first GP in the list selected for reservation in the first election, along with the fourth, the seventh and so on, skipping three in sequence. In the next election the second GP in the list is selected, and additional GPs picked again by skipping three sequentially. This method, while not perfectly random, ensures that GPs are selected for women's reservation via an exogenous process. Two of the states – AP and Tamil Nadu have direct elections for the president – akin to a presidential system, while two – akin to a prime ministerial system – have indirect elections. Every village is divided into wards, each of which elects a member to the panchayats, and each ward is also reserved using a rotation system. Thus 1/3 of all GP members are always women. In reserved GP's with indirect elections the president is elected from among the women ward members. Table 1 presents a breakdown of the president's gender by reservation status and state.

To test the exogeneity of the reservations system we regress a dummy for women's reservations, one at a time, on 11 measures of public service quality and general levels of development from the 1991 census. We also regress it on measures of village inequality and caste composition collected from our survey in 2002. Since elections in these villages were all completed prior to our survey, and census data are available to the election commissions to determine the composition of constituencies, if villages were selected for reservations on the basis of any endogenous criteria we would expect to see a correlation between reservations status and at least some of the census

outcomes. On the other hand if the villages were selected for reservations on the basis of some social or cultural criteria – e.g. being relatively equal or unequal, or with low levels of upper caste domination, etc. – measures of social inequality would be correlated with reservations status. State dummies are also included in all these regressions to allow for the possibility that states may have implemented the 73rd amendment reforms at a different pace, and used different rotation and election systems. Table 2 presents results from these regressions. Of the twenty variables we tested, nineteen have coefficients that are not significantly different from zero. Only one variable – medical facilities in the GP – is significant for reasons that are unclear. This suggests that reservations were unlikely to have been allocated to GPs on the basis of observable characteristics and supports the assertion that they were exogenously allocated.

The 73rd amendment also mandated reserved seats for scheduled castes and tribes (SC/ST) and for other backward castes(OBC) on the basis of their proportion in the village population. In the four states we are studying, SC/ST and OBC reservation overlap with women’s reservations. Thus approximately a third of GPs with SC/ST or OBC reservations would – randomly – also be reserved for women. This is likely to confound the impact of the two types of reservations so we focus on contrasting GPs exclusively reserved for women with unreserved GPs. The impact of SC/ST reservations on panchayats has been examined elsewhere (Besley, Pande and Rao 2004 [2], Chattopadhyay and Duflo 2004a [7]).

### 3 Results

#### 3.1 Selection of women presidents

We begin by examining the selection issue. Are women in reserved constituencies of worse quality than unreserved presidents? Are they tokens? One answer can be found by looking at who persuaded the presidents to contest the elections. Table 3 provides simple cross-tabulations. We see that the responses for the two categories are similar – both groups were more or less equally likely to have been asked to contest by political elites - Members of the Legislative Assembly (MLAs), previous presidents, and important members of the community. The largest difference comes from reserved women being more likely to have been persuaded by spouses to run than unreserved presidents. This could again be reflective of general gender differences – that women who do not have supportive spouses are not likely to seek elected office.

We now proceed to examine president characteristics in reserved and unreserved seats. Table 4 provides the summary statistics. Reserved presidents are younger, worse educated (by two years of schooling), have smaller land holdings, lower knowledge scores<sup>8</sup>, and less political experience than unreserved presidents. Note that the standard deviations on education and the knowledge score are larger for reserved women than for unreserved presidents – suggesting that women who stand for election in reserved seats are a very diverse group. However, it is possible that these differences merely reflect gender differentials in the general population, since 85% of presidents in unreserved GPs are men – and women are distinctly worse educated than men on average. We can check this by comparing women who become presidents with women in the general population who are eligible to stand for election (they have to be over 21 and literate). This comparison, column (4) with column (2), shows that women presidents are from the top end of the distribution of women on landholding, wealth and knowledge, and above average on education and age.

Given the extent of dispersion in these distributions it is possible that there is a lot of spatial variation in attributes and that these trends may not persist once spatial controls are included. Another possibility is that other household characteristics may be driving these differences. For instances the differences in knowledge score may simply indicate that women who become presidents come from better-off households. A third question that requires further investigation is whether women presidents are from the same elite families as men presidents. To test all these hypotheses we run the following OLS regression on individual level data:

$$P_{bi} = \alpha_b + \kappa H_{bi} + DW_{bi} + \mu C_{bi} + \gamma V_{bi} + \varepsilon_{bi} \quad (1)$$

Where  $P_{bi}$  is the set of individual  $i$ 's characteristics in block  $b$ ,  $\alpha_b$  are block fixed effects,  $H_{bi}$  are a set of characteristics of the individual's household – household size, religion SC/ST status, occupation and literacy of head,  $W_{bi}$  indicates whether the individual is elected president in a seat reserved for women.  $V_{bi}$  is a vector of inequality and oligarchy in individual  $i$ 's village, and  $\varepsilon_{bi}$  is the error term. We run three specifications. In the first specification, the sample is the eligible (literate, above 21 years old) population. In this specification the coefficient  $D$  provides a measure of whether

---

<sup>8</sup>Knowledge scores come from a series of political knowledge questions where respondents were asked to identify the names of prominent leaders such as the prime minister and chief minister, and to explain important rules such as the percentage of villages in a GP reserved for women.

reserved(women) presidents are different from the eligible population. In this specification we also set  $\gamma=0$ . In the second specification, we restrict the sample to eligible women. In this specification  $D$  measures how different reserved(women) presidents are from other eligible women, thus providing a difference free of gender effects. In this specification we also set  $\gamma=0$ . In the third specification, we restrict the sample to the set of presidents.  $D$  now measures how different reserved(women) presidents are from unreserved presidents in the observed attributes.

Table 5 reports the results for the coefficient  $D$  for a variety of attributes, for the three specifications mentioned above. Looking at the 3rd column which compares reserved and unreserved presidents, we see that reserved presidents are significantly worse off than unreserved presidents in their education, knowledge and political experience, and also tend to be younger. However, looking at the 2nd column we see that they are better off than comparable women in the population in terms of land ownership, wealth and knowledge score. In terms of age, women president are older, and in education they are not different from the average eligible woman. Column 1 compares reserved presidents to people of all genders, over the age of 21, and literate in the population and the results are very similar to the comparison with eligible women. Controlling for gender differences, women presidents are wealthier, and more knowledgeable than the general population and representative in terms of education. This does not suggest that they are tokens.

To provide a benchmark for comparison, we also examine the difference in characteristics between individuals elected in unreserved constituencies (the vast majority - 85 percent - of which are men) and eligible men. Comparing columns (2) and (4), we observe that unreserved presidents differ from eligible men along the same characteristics as women presidents do from eligible women. The only distinction is that unreserved presidents are substantially more educated than the average man.

Finally we examine whether the gap between women leaders and other women is different from the gap between unreserved leaders and other men. Here we see that the gap in the extent to which women leaders are more knowledgeable than other women is greater than the gap between unreserved leaders and other men, but that the reverse is true for the gap in land ownership.

We thus conclude that there is little evidence to support the notion that women presidents are tokens. However, there is a great deal of heterogeneity in the quality of women who become presidents – a heterogeneity that is reflected in the general population of women. This heterogeneity may

therefore matter in their effectiveness as presidents.

### **3.2 Impact of Reservations on Women’s Participation**

One important impact of women’s reservation is on women’s political and community participation. Besley, Pande and Rao (2005b[5]) show that community participation, measured by attendance in public village meetings, improves the targeting towards disadvantaged sections of the village. Chattopadhyay and Duflo find that in panchayats reserved for women, the fraction of women among village meeting (Gram Sabha) participants increased significantly, in West Bengal villages, while in Rajasthan it decreased - but not significantly. The results in Table 6 indicate that there is no significant effect of women’s reservation on women’s participation in the Gram Sabha. Nor do we see significant changes in the presence of women’s organizations. We conclude that the presence of women leaders does not have noticeable effects on women’s participation.

### **3.3 Impact of Reservations on Panchayat Activities**

Data on the activities of panchayats come from the PRA. In the PRA, respondents were asked to assess activities of the panchayats after the last election on a variety of public good investments. Table 7 attempts to replicate CD’s results by examining the unconditional difference in panchayat activities, for a variety of goods and services, in reserved and unreserved GPs. We first report mean activity levels in the two categories, and then the coefficient of a dummy variable for women’s reservations from a regression that controls for block fixed effects with standard errors clustered at the GP level. From the seven activities we examine, we see a significant difference only for activities in education. Relative to unreserved panchayats, panchayats reserved for women had significantly more education-related activities. However, on the vast majority of activities, reserved presidents do no different than unreserved presidents. Indeed, we see that the differences between reserved and unreserved panchayats in these six categories are not jointly significant. Thus, we conclude that women presidents are very similar in their performance to their male counterparts.

#### **3.3.1 Reservations and Women’s Preferences**

CD show that the impact of women’s reservations on the activities of panchayats is affected by the preferences of women. We test whether men and women differ significantly in their preferences for public good investments

in the village. Note our data on priorities of men and women is based on a retrospective question on problems faced two years ago, while CD's is based on preferences revealed by the issues women petition the GP about. Therefore the preference data in the two surveys are not exactly comparable. But even with our method we do notice significant differences between men and women both in PRA and household surveys - suggesting that the information is picking up gender differences. Table 8(a) reports the results comparing preferences from the men's and women's PRA. We see that the large differences are in sanitation, which women are more likely to see as a problem, and roads, which men are more likely to see as a problem. These differences are tested with a regression controlling for village fixed effects, and we see that the differences on sanitation and roads persist after village effects are controlled. However, on five of the seven priorities there is no gender difference observed.

PRAs are better suited to looking at public goods because they are the result of a public interaction where consensus issues are more likely to arise. To examine issues that may matter more at the level of households, we contrast the PRA data with data on the ranking of problems from two years ago at the individual level in Table 8(b). Here we see that men have a greater preference for education and infrastructure, while women are more likely to consider electricity and housing as a priority. Controlling for village fixed effects, however, only the electricity and housing differences remain suggesting that they are robust differences not driven by differences in village characteristics. Thus, while we see differences in preferences across men in women from three different sources of data, these differences are neither consistent with CD nor across our data sources. Recalling that women presidents are more active in education, we conclude there is no evidence to suggest that women presidents are acting in a manner that is more sensitive to the preferences of women<sup>9</sup>.

### 3.3.2 Reservations and president characteristics

In testing the impact of women's reservation on panchayat activities, the heterogeneity in the quality of presidents has to be kept in mind. Does the quality of the president matter? Does it matter more in reserved GPs?

---

<sup>9</sup>We also conducted an analysis, similar to CD, with activity-specific regressions where women's reservations were interacted with women's preferences to see if these preferences were driving the activities of women-reserved pradhans. These results, available from the authors on request, also do not demonstrate any relationship between preferences and panchayat activities.

Cognizant of the exogeneity of women’s reservations, we can test these hypothesis in the OLS following framework:

$$Y_{bv} = \alpha_b + \beta P_{bv} + \gamma V_{bv} + \eta W_{bv} + \phi(p_{bv} * W_{bv}) + \varepsilon_{bv} \quad (2)$$

$Y_{bv}$  is a measure of overall panchayat activism in village  $v$ , block  $b$ , as outlined in Table 2,  $\alpha_b$  are block fixed effects,  $P_{bv}$  is the set of president characteristics<sup>10</sup>, and  $V_{bv}$  is the set of village characteristics<sup>11</sup>.  $W_{bv}$  is an indicator for whether the GP to which the village  $v$  belongs is reserved for women. The coefficient  $\eta$  is an estimate of the impact of women’s reservations conditioning on everything else.  $\phi$  provides an estimate of how much president characteristics matter in villages with GPs reserved for women.  $p_{bv}$  is a subset of  $P_{bv}$ <sup>12</sup>. We examine how the president’s age, education, wealth, land holding and political experience affect his or her performance in reserved relative to unreserved panchayats.

Table 9 reports the results for these five specifications. The most important result is that political experience matters in panchayats reserved for women. In fact, women presidents without previous political experience perform worse relative to their male counterparts. But, keeping in mind that experience is measured as number of terms served, as women gain experience they catch up to men and potentially surpass them. This is a very optimistic result as it gives an empirical basis for encouraging women to take leadership positions.

### 3.3.3 Reservations and village characteristics

Another important question that has to be addressed is the extent to which inequality and concentration of power in one caste in the village affect the effectiveness of women presidents? Can elite control affect panchayat governance, particularly in reserved GPs? We use an OLS framework identical to the previous one except that now we interact reservation with village characteristics.

$$Y_{bv} = \alpha_b + \beta P_{bv} + \gamma V_{bv} + \eta W_{bv} + \phi(v_{bv} * W_{bv}) + \varepsilon_{bv} \quad (3)$$

---

<sup>10</sup> age categories: young (21-30), prime(30-50), old(50+); education (years); dummy for any previous political experience; dummy for wealthy; landholding(acres)

<sup>11</sup> proportion land controlled by upper castes; land Gini categories: low (1st quartile), medium(interquartile range), high(4th quartile), literacy rate, fraction landless, pradhan’s village

<sup>12</sup> 15% of pradhans in unreserved GPs are women so we can also control for pradhans sex in these regressions. Adding this slightly weakens the effect of reservation but does not change the effects of interactions. We do not report them.

The notations are the same as before;  $v_{bv}$  is a subset of  $V_{bv}$ . We examine the differential effect of upper-caste domination and land inequality in reserved and unreserved GPs. Table 10 presents the results. The first village characteristic of interest is the proportion land held by the upper castes - which indicates the extent to which upper castes are "dominant" - that is they dominate village life (Srinivas, 1959[17]). We observe that, in reserved GPs, a higher proportion of land held by upper castes leads to lower overall GP activism. Furthermore, in villages where upper castes hold only small fractions of land women presidents are more effective than men. These results suggest that power in the hands of upper castes stifles the ability of women to function as presidents in reserved constituencies. Since the caste distribution of women-reserved and unreserved presidents is not significantly different, these results should not be interpreted as high castes blocking the efforts of low castes, but of patriarchy being more pronounced in villages dominated by upper castes. There is no significant differential effect of land inequality, which suggests that large fractions of land in the hands of a small group is only harmful if that group happens to be the upper caste.

### 3.3.4 Reservations and States

The advantage of using block pair fixed effects (as described in the sampling strategy) is that it allows us to estimate state effects and thus it permits us to examine how reservations work across states, controlling for historic and linguistic similarities. We use the same framework and introduce interaction with state dummies.

$$Y_{pv} = \alpha_p + \delta S_{pv} + \beta P_{pv} + \gamma V_{pv} + \eta W_{pv} + \phi(S_{pv} * W_{pv}) + \varepsilon_{pv} \quad (4)$$

$Y_{pv}$  is the measure of overall GP activism in village  $v$ , pair  $p$ .  $\alpha_p$  represents the pair fixed effects.  $S_{pv}$  are state dummies<sup>13</sup>. The rest of the variables are the same as the block fixed-effects specification. In table 11 we explore the extent to which the effects of women's reservation differs across states. Reserved constituencies in Karnataka perform best. Kerala and Tamil Nadu follow and perform similarly. In its reserved constituencies, Andhra Pradesh lags behind the other three states. This is possibly because Karnataka's reservation system has been in place for even longer than Kerala's and hence had time to mature. The difference between Kerala and Andhra Pradesh can be explained as Kerala is both more gender-equal than

---

<sup>13</sup>We keep Kerala as the omitted category

AP, and has a more political mature reservation and electoral system at the GP level. Kerala and Karnataka are also different from AP and Tamil Nadu in having indirect elections for the president, and it is possible that this mechanism may also contribute the state differences. We have no way of sorting out those two effects.

## 4 Conclusion

We show that women elected in reserved constituencies are not tokens. They are as likely to be persuaded to contest by political elites as unreserved presidents. They are from the upper end of the distribution of women and tend to be more knowledgeable about political activities, more politically experienced, and wealthier than the average woman.

The results of this analysis do not show a simple women's reservations effect. We do however conclude that women presidents never perform worse than men. Unlike Chattopadhyay and Duflo (2004) there is no evidence to show that reserved women presidents act in ways that are more congruent with the preferences of women. The contrast with Chattopadhyay and Duflo may reflect the fact that their evidence is from Rajasthan and West Bengal, an area of India with much higher gender differentials than South India where our survey was conducted.

Another important message is that president heterogeneity matters. In particular, women presidents in reserved GPs are unambiguously more effective when they are more experienced. Furthermore, we see that women in reserved GPs perform worse when most of the land in the village is owned by upper castes. This suggests that caste structures may be correlated with structures of patriarchy making the job of women particularly difficult when they are confronted with entrenched hierarchies. We also see that women presidents in reserved GPs in AP perform the worst, while those in Kerala and Karnataka tend to perform better. This again indicates the salience of the maturity of the reservations system since it has been in place much longer in Kerala and Karnataka than in AP. This effect in conjunction with the positive effect of the presidents political experience together point towards a hopeful future. As women acquire more experience via the reservations system, and as the system continuous to mature, women will become more effective leaders.

Thus, our results are far more supportive of the "optimists" than the "pessimists." In particular, women presidents become more effective when they acquire more political experience. Interestingly, they do not seem to act

in ways that support the preferences of women. The results also suggest that women reserved presidents would benefit from a more supportive environment in upper caste dominated villages, and in states where the reservations system is less mature.

## References

- [1] Bardhan, Pranab, Dilip Mookherjee, and Monica Parra Torrado: "Impact of Reservations of Panchayat presidents on Targeting in West Bengal", mimeo, November 2005
- [2] Besley, Timothy, Rohini Pande, Lupin Rahman and Vijayendra Rao, [2004a] "The Politics of Public Good Provision: Evidence From Indian Local Governments," *Journal of the European Economic Association*, April-May 2004
- [3] Besley, Timothy, Rohini Pande, Lupin Rahman and Vijayendra Rao, [2004b], "Decentralization in India: A Survey of South Indian Panchayats," mimeo
- [4] Besley, Timothy, Rohini Pande, Lupin Rahman and Vijayendra Rao, "Political Selection and the Quality of Government: Evidence From South India," mimeo, March 2005
- [5] Besley, Timothy, Rohini Pande, and Vijayendra Rao [2005b] "Participatory Democracy in Action: Survey Evidence from India," forthcoming in the *Journal of the European Economics Association*.
- [6] Chambers, Robert, *Whose Reality Counts: Putting the First Last*, Intermediate Technology Publications, London, 1997
- [7] Chattopadhyay, Raghavendra and Esther Duflo (2004a): "The Impact of Reservation in the Panchayati Raj: Evidence From a Nationwide Randomized Experiment" , *Economic and Political Weekly* (forthcoming)
- [8] Chattopadhyay, Raghavendra and Esther Duflo (2004b): "Women as Policy Makers: Evidence From a Randomized Policy Experiment in India" , *Econometrica* 72(5), Pp: 1409-1443, September 2005
- [9] Chathukulam J. and M.S John (2000): "Empowerment of Women Panchayat Members: Learning from Kerala (India)", *Asian Journal of Women Studies*, 6(4), 66-101

- [10] Clots-Figueras, Irma (2005): "Women in Politics: Evidence from Indian States", Political Economy and Public Policy Series, Suntory and Toyota International Centres for Economics and Related Disciplines, October 2005
- [11] Duflo, Esther and Petia Topalova "Unappreciated Service: Performance, Perceptions, and Women Leaders in India", Department of Economics, Massachusetts Institute of Technology, mimeo, October 2004
- [12] Filmer, King and Pritchett, "Gender Disparity in South Asia", World Bank Policy Research Paper No. 1867, 1998
- [13] Matthew, George and Nirmala Buch, *Status of Panchayati Raj in the States and Union Territories of India 2000*, Institute for Social Studies, Delhi, 2000
- [14] Rai, Manoj, Malini Nambiar, Sohini Paul, Sangeeta Singh, Satinder Sahni, *The State of Panchayats : A Participatory Perspective*, Samskriti, 2001
- [15] Ramesh, Asha and Bharti Ali (2001), *33 1/3: Reservation Towards Political Empowerment, Books for Change*, Bangalore
- [16] Sen, Amartya, *Development as Freedom*, Alfred E. Knopf, 1999
- [17] Srinivas, MN, "The Dominant Caste in Rampura," *American Anthropologist*, Vol. 61, No. 1., pp. 1-16, February 1959
- [18] Varatharajan, D, R. Thankappan, Sabeena Jayapalan, "Assessing the Performance of Primary Health Centres Under Decentralized Government in Kerala", *Health Policy and Planning* 19(1), Pp: 41-51, 2004
- [19] Vyasulu P. and V. Vyasulu (1999): "Women in Panchayati Raj: Grass Roots Democracy in Malgudi", *Economic and Political Weekly*, 34(52), 3677-3686
- [20] World Bank, *Engendering Development*, World Bank and Oxford University Press, 2001
- [21] World Bank, "India: Fiscal Decentralization to Rural Governments", Rural Development Unit, South Asia Region, Report No. 26654-IN, 2004

- [22] World Bank, *World Development Report 2006 - Equity and Development*, World Bank and Oxford University Press, 2005

Table 1: Fraction Women among Pradhans in Reserved and Unreserved GP

	GP reserved for women	GP reserved for SC/ST	GP reserved for SC/ST women	Unreserved GP
<b>Andhra Pradesh</b>				
Total number	3	11	1	14
Proportion of Female Pradhans	100%	9.1%	100%	14.3%
<b>Karnataka</b>				
Total number	7	11	11	23
Proportion of Female Pradhans	100%	18.2%	100%	34.8%
<b>Kerala</b>				
Total number	6	4	0	8
Proportion of Female Pradhans	100%	0%	-	0%
<b>Tamil Nadu</b>				
Total number	11	3	1	34
Proportion of Female Pradhans	100%	0%	100%	2.9%
<b>Overall</b>				
Total number	27	29	13	79
Proportion of Female Pradhans	100%	10.3%	100%	15.2%

Table 2: Exogeneity of reservation

Variable		Marginal effect on probability of GP pradhan being reserved for women	Nr. Obs.
1991 census variables	Population	0.000 (0.103)	196
	Proportion Women	15.237 (1.416)	195
	Fraction villages with educational facilities in GP	-0.600 (-1.502)	191
	Fraction villages with medical facilities in GP	-1.017 (-2.176)**	191
	Fraction villages with drinking water in GP	-0.558 (-1.255)	191
	Fraction villages with postal facility in GP	-0.175 (-0.557)	191
	Fraction villages with communication facility in GP	-0.192 (-0.550)	191
	Fraction villages with power supply in GP	-0.600 (-1.326)	191
	Fraction irrigated land in GP	-1.197 (-1.570)	192
	Average distance from town in GP	0.000 (0.031)	192
	GP female literacy	-0.832 (-0.801)	195
	GP male literacy	-0.677 (-0.718)	195
	GP female employment	0.378 (0.394)	195
	GP male employment	-1.013 (-0.439)	195

## Notes:

1) The marginal effects are computed from individual probit regressions with state fixed effects, separately for each RHS variable

2) z-values in parentheses \*\* significant at 5 percent

3) In a probit with all the RHS variables included a F-test cannot reject the hypothesis that all the coefficients are jointly = 0

Table 3: Persuasion

Person who persuaded to contest election	Reservation status	
	women only	unreserved
Self initiated	2 (7.41)	16 (20.25)
Political	5 (18.52)	14 (17.72)
Spouse	5 (18.52)	1 (1.27)
Relative and neighbors	4 (14.81)	13 (16.46)
Caste and other groups	6 (22.22)	25 (31.65)
Other	5 (18.52)	10 (12.66)

Notes: 1) Percentages out of total reservation category size in parentheses

2) Political category includes: MP/MLA/party official, previous pradhan, important leader in community, other ward members

3) Other includes: NGO and other unspecified categories

Table 4: Summary of individual characteristics

Characteristic	(1) Eligible population	(2) Eligible women	(3) Eligible men	(4) Pradhan in Seats Reserved for Women	(5) Pradhan in Unreserved seats
Age	39.179 (12.319)	35.995 (11.061)	41.433 (12.666)	39.148 (10.862)	43.468 (11.502)
Education	6.331 (4.149)	5.708 (4.107)	6.773 (4.124)	6.074 (4.287)	8.456 (3.426)
Landholding	2.372 (4.565)	1.851 (3.867)	2.741 (4.970)	7.909 (9.597)	9.244 (9.654)
Wealthy (dummy)	0.393 (0.488)	0.409 (0.492)	0.382 (0.486)	0.778 (0.424)	0.722 (0.451)
Knowledge score	3.602 (2.218)	2.421 (1.973)	4.439 (1.990)	3.185 (1.642)	4.608 (0.912)
Political experience (terms)				(1.444) (0.506)	(1.772) (0.933)
N	2113	876	1237	27	79

Notes:

- 1) The GPs reserved for SC/ST, SC/ST women, OBC and OBC women are excluded
- 2) Literate individuals aged 21 and above are eligible to contest pradhan elections
- 3) Only current politicians were asked about past political experience

Table 5: Pradhan Characteristics Comparisons

	Pradhan in Seats Reserved for Women			Unreserved Seats	(4) - (2) significance
	Compared with eligible population (1)	Compared with eligible women (2)	Compared with unreserved pradhans (3)	Compared with eligible men (4)	
Nr. Obs.	2116	879	100	1250	
Age	0.670 (1.906)	4.238 (1.776)**	-3.653 (2.985)	3.949 (1.288)***	
Education	-0.473 (0.787)	0.377 (0.845)	-2.895 (0.988)***	1.830 (0.364)***	
Land owned	4.686 (1.566)***	5.328 (1.552)***	0.969 (1.830)	6.226 (1.082)***	**
Wealthy (dummy)	0.402 (0.083)***	0.423 (0.090)***	0.013 (0.122)	0.382 (0.049)***	
Knowledge score	-0.422 (0.268)	0.861 (0.276)***	-1.231 (0.286)***	0.258 (0.127)***	***
Political experience (terms)			-0.458 (0.203)**		

## Notes

- 1) Literate individuals, aged 21 and above are the eligible population
- 2) The coefficient reported is that of the dummy for being elected in a seat reserved for women
- 3) Block fixed effects included in all comparisons
- 4) The GPs reserved for SC/ST, SC/ST women, OBC and OBC women are excluded
- 5) Controls for SC/ST included in regressions (1), (2), and (4)
- 6) Controls for SC/ST, religion, household head literacy, household head occupation, household size, village literacy rate, inequality, oligarchy in (3)
- 7) Standard errors, clustered at GP level in parentheses
- 8) \* significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent

Table 6: Effect of Women's Reservation on Women's Political and Community Participation: Village Level Data

Dependent variable	Mean, women reserved GP	Mean, Unreserved GP	Difference	Nr.obs
Fraction women among Gram Sabha participants	0.3323 (0.0153)	0.3210 (0.0099)	0.0113 (0.0183)	272
Fraction villages with women's NGOs formed after last Pradhan election	0.0715 (0.0225)	0.0418 (0.0109)	0.0297 (0.0268)	375
Fraction villages with women's CBOs formed after last Pradhan election	0.1762 (0.0341)	0.1916 (0.0241)	-0.0154 (0.0413)	385

Notes: 1) Standard errors, controlling for block fixed effects, clustered at GP level in parenthesis

2) Sample excludes GPs reserved for SC/STs, OBCs, SC/ST women, or OBC women

3) CBO - Community Based Organization

Table 7: Effect of Women's Reservation on GP Public Good Activities

GP activity in:	Mean, Reserved GP	Mean, Unreserved GP	Difference	Nr. Obs.
Water	-0.112 (0.068)	-0.051 (0.052)	-0.061 (0.090)	310
Health	0.103 (0.087)	0.023 (0.058)	0.080 (0.096)	310
Education	0.125 (0.070)	-0.057 (0.053)	0.182** (0.088)	310
Sanitation	-0.118 (0.079)	-0.132 (0.051)	0.015 (0.100)	310
Roads	-0.150 (0.056)	-0.123 (0.046)	-0.027 (0.072)	310
Transport	-0.131 (0.063)	-0.099 (0.057)	-0.033 (0.086)	310
Electricity	-0.124 (0.088)	-0.025 (0.056)	-0.098 (0.108)	310
Differences jointly significant (p-value)				0.391

Notes: 1) Block fixed effects included in regressions

2) Standard errors, clustered at GP level in parenthesis

3) \* Significant at 10% level

4) Sample excludes GPs reserved for SC/STs, SC/ST women, OBC, OBC women

5) GP activity measured as a count of actions in the respective sector, standardized by the mean and sd of all villages

6) The joint significance test is an F-test that the vector of activities, as RHS variables, is different than 0

Table 8a: Men's and women's priorities, 2 years ago, as expressed in the answers to the PRA questionnaire

<b>Preference category</b>	<b>Proportion villages with women expressing preference</b>	<b>Proportion villages with men expressing preference</b>	<b>Difference: women - men</b>	<b>Nr. Obs</b>
Water	0.443 (0.018)	0.399 (0.018)	0.045 (0.036)	1036
Health	0.058 (0.009)	0.058 (0.009)	0.000 (0.019)	1036
Education	0.027 (0.007)	0.035 (0.006)	-0.008 (0.013)	1036
Sanitation	0.110 (0.011)	0.046 (0.011)	0.064 (0.021)***	1036
Roads	0.098 (0.012)	0.174 (0.012)	-0.076 (0.025)***	1036
Transport	0.041 (0.006)	0.039 (0.006)	0.002 (0.013)	1036
Electricity	0.043 (0.008)	0.029 (0.008)	0.014 (0.015)	1036

Notes:

- 1) Preferences of women derived from women's PRA, preferences of men - from general PRA
- 2) Village fixed effects included in regression
- 3) Standard errors clustered by village, in parenthesis
- 4) \*\*\* significant at 1 percent

Table 8b: Men's and women's priorities, 2 years ago, as expressed in the answers to the Household questionnaire

<b>Preference category</b>	<b>Proportion women expressing preference</b>	<b>Proportion men expressing preference</b>	<b>Difference: women - men</b>	<b>Nr. Obs</b>
Water	0.357	0.350	0.005 (0.014)	5268
Health	0.038	0.041	-0.001 (0.006)	5268
Education	0.013	0.022	-0.006 (0.004)	5268
Infrastructure	0.283	0.303	-0.020 (0.013)	5268
Transport	0.052	0.053	-0.002 (0.005)	5268
Electricity	0.068	0.052	0.016 (0.007)**	5268
Housing	0.067	0.052	0.014 (0.006)***	5268

Notes:

1) Village fixed effects included in regression

2) Standard errors clustered by village, in parenthesis

3)\*\* significant at 5 percent; \*\*\* significant at 1 percent

Table 9: Effect of women's reservation: Interactions with individual characteristics

	Overall GP activism				
	Age	Education	Wealthy	Land holding	Political exp.
Reservation for Women	0.003 (0.122)	0.200 (0.137)	0.200 (0.126)	0.083 (0.076)	-0.325* (0.165)
Pradhan Young	-0.058 (0.173)				
Pradhan Prime	-0.008 (0.141)				
Women Res * Young	0.252 (0.173)				
Women Res * Prime	0.052 (0.144)				
Pradhan Education (years)		0.026** (0.011)			
Women res * Education		-0.016 (0.015)			
Pradhan wealthy			-0.134** (0.064)		
Women res * wealthy			-0.147 (0.133)		
Pradhan landholding				0.001 (0.005)	
Women res * landholding				-0.000 (0.007)	
Pradhan Political Exp					-0.000 (0.039)
Women res. * Political Exp					0.256** (0.100)
N	0.465	0.466	0.466	0.464	0.473
Adj R-sq	297	297	297	297	297

Notes: 1) standard errors clustered at GP level in parenthesis, \* significant at p=0.1, \*\* significant at p=0.05

2) Sample excludes GPs reserved for SC/STs, SC/ST women, OBC, OBC women

3) Block fixed effects included in regression

4) Overall GP activism is an average of standardized measures from PRA

5) The levels of all variables in 2.2a and 2.2b are included in all specifications; the coefficients on the levels are reported only for the interacted variables

6) In addition, variables included but not reported: fraction landless, literacy rate

Table 10: Effect of women's reservation: Interactions with village characteristics

	<b>Overall GP activism</b>	
	<b>Proportion Upper</b>	
	<b>caste land</b>	<b>Land Gini</b>
Reservation for Women	0.151** (0.072)	0.035 (0.068)
Upper Caste Land Prop.	0.159 (0.106)	
Women res. * Upper Prop.	-0.269* (0.144)	
Gini Low		-0.142* (0.079)
Gini High		0.033 (0.096)
Women res * Gini Low		0.140 (0.140)
Women res * Gini High		0.028 (0.088)
<b>N</b>	<b>0.468</b>	<b>0.465</b>
<b>Adj R-sq</b>	<b>297</b>	<b>297</b>

Notes: 1)standard errors clustered at GP level in parenthesis, \* significant at p=0.1, \*\* significant at p=0.05

2) Sample excludes GPs reserved for SC/STs, SC/ST women, OBC, OBC women

3) Block fixed effects included in regression

4)Overall GP activism is an average of standardized measures from PRA

5)The levels of all variables in 2.2a and 2.2b are included in all specifications; the coefficients on the levels are reported only for the int

6)In addition, variables included but not reported: fraction landless, literacy rate

Table 11: Effect of women's reservation: State Interactions

	Overall GP activism
Reservation for Women	0.010 (0.111)
Andhra Pradesh	1.220*** (0.313)
Karnataka	0.392** (0.164)
Tamil Nadu	0.163 (0.163)
Women res. * AP	-0.878** (0.290)
Women res. * KA	0.357* (0.201)
Women res. * TN	-0.036 (0.138)
N	0.328
Adj R-sq	285

Notes: 1)standard errors clustered at GP level in parenthesis, \* significant at p=0.1, \*\* significant at p=0.05

2) Sample excludes GPs reserved for SC/STs, SC/ST women, OBC, OBC women

3) Block pair fixed effects included in regression

4)Overall GP activism is an average of standardized measures from PRA

5) The levels of all variables in 2.2a and 2.2b are included

6) In addition, variables included but not reported: fraction landless, literacy rate