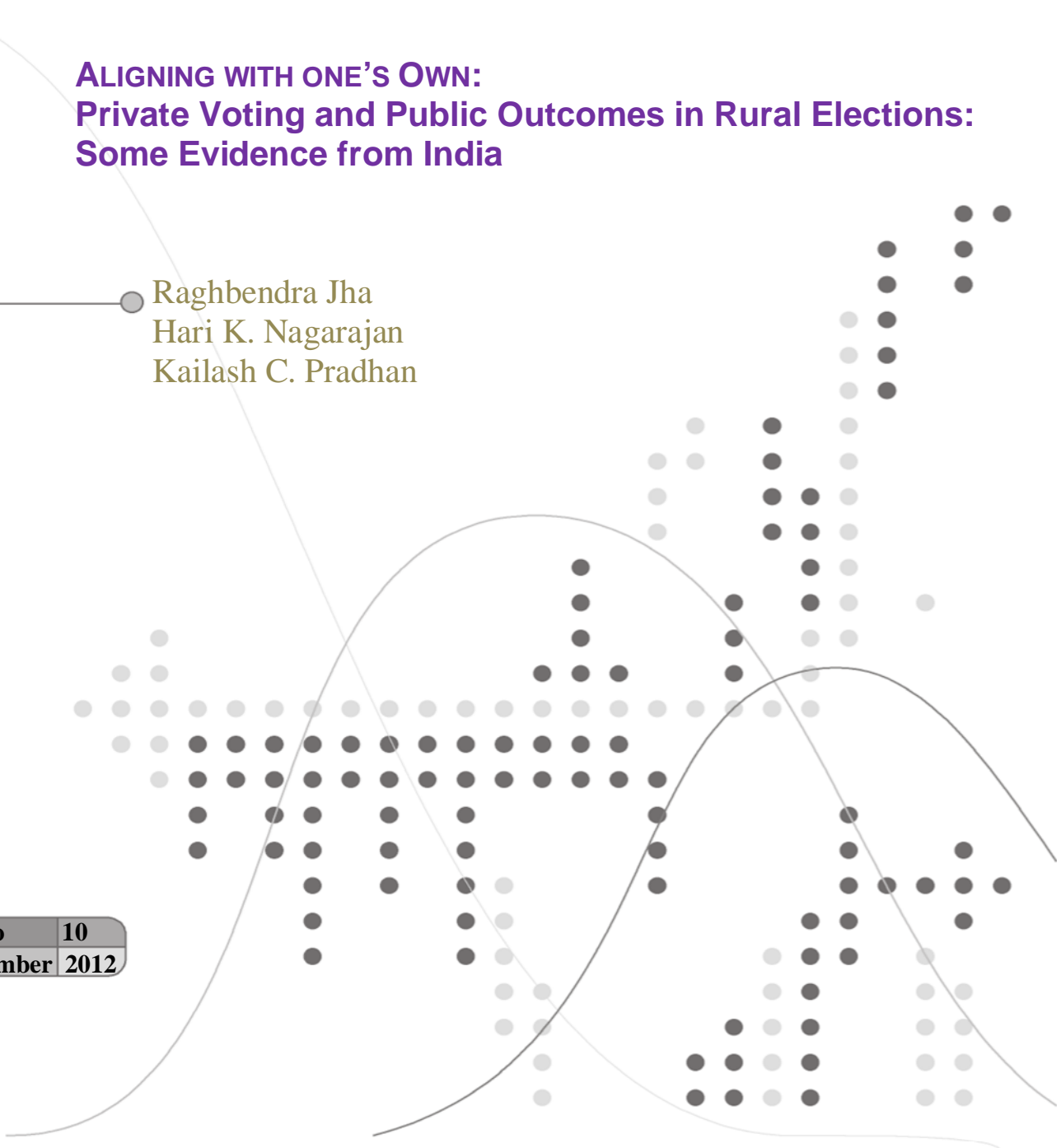


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ALIGNING WITH ONE'S OWN: Private Voting and Public Outcomes in Rural Elections: Some Evidence from India

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Abstract

Identity based voting is a second best solution adopted by households to minimize the negative effects of one’s own identity and (or) identity based coalitions. If a significant source of household welfare is one’s identity or, membership in ethnically defined groups, then politics that results will be parochial in nature. In parochial politics voting along ethnic lines becomes a significant tool for gaining welfare or to discipline the elected representatives. Using newly available data from rural India, we establish that identity based voting will lead to enhanced participation in welfare programs and increased consumption growth. The paper is able to show that identity based voting results from the externalities derived from membership in social and information networks, and such voting by enhancing participation in welfare programs leads to significant increases in household consumption growth.

Key Words: Identity Based Voting, Panchayats, Decentralization, Devolution

JEL Classification: D7, D72, D73

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Right wing academic force — particularly a group of sociologists and anthropologists — advised the Bharatiya Janata Party led National Democratic Alliance Government not to go for caste based census in 2001 as it would go against the ruling upper castes and communities. It is fallacious to argue that society will get further divided if the population of each caste is known to the policy maker and public...It is true that we cannot distribute everything based on caste. But caste census is the right basis for statistics such as literacy rates and issues like proportional representation. Once we cite the Census data there cannot be any authentic opposition to that evidence...In a democracy based on numbers, any section of the society can come to power. If the caste census is done, then Indian democracy would thrive on the firm support of the lower castes who keep hoping of getting their share based on their numbers — **Kancha Ilaiah (an academic arguing for a caste based census in India).**¹

Socio-economic development can be planned for OBCs like for the SC/STs. Every group must get their due” - **(President of the Congress party in Tamil Nadu)**

I. Introduction

It has been established in the literature that parochial politics- often associated with inadequate provision of public goods, clientelism, and, kleptocracies-could result from and lead to persistently weak governance. In such circumstances, informal institutions (social networks) are often the mechanisms by which leaders are both elected and “disciplined” (Munshi and Rosenzweig, 2008). Since in Indian parochial politics castes (henceforth Jatis)² play a significant role both during and after elections, it is important to understand the drivers of participation in elections, and relate these to specific outcomes. For individual households elections are a means of ensuring that a socially appropriate candidate (i.e., of the “correct” identity) is elected. If social networks (organized along the lines of Jati) are playing a significant role in providing information, and mutual insurance, such networks could also play a critical role in voting decisions. Identity based voting for a candidate is then a collective decision of both households and the network and influences the outcome of public decisions, especially in the supply of local public goods, ensuring access to public goods and improvements in welfare for both individual

¹ *The Sunday Express*, July 4, 2010

² The term caste is an aggregation. An appropriate reference to the social position of a member (and household) is Jati. In this paper we will refer to the social position by Jati. The official aggregation will be referred to as caste (such as SC/ST, or OBC).

members, households as well as for the network as a whole. In this paper, we argue that identity based voting is a mechanism by which voters can ensure commitment by elected representatives to deliver public goods as well as adhere to the mandates of the elections.

Why do we observe identity based voting? It can be argued that a decentralized political apparatus is adequate to ensure commitment by elected representatives³. However, in socially fragmented societies where groups of households identifying with their Jatis may be excluded from access to public goods, or where the system of governance is synonymous with clientelism, this assumption may not be valid. In such circumstances, identity based voting may be a mechanism for inclusion (a form of signaling) as well as ensuring commitment. Hence, social networks can affect not only the quality of mutual insurance (Munshi and Rosenzweig, 2006), allow access to labor markets and credit (Banerjee and Munshi 2004; Munshi and Rosenzweig, 2005), but also influence the political process and the consequent provision of local public goods: candidates elected on the basis of identity, cannot deviate from commitment. Hence, both the quantum of provision and access to public goods will increase.

Much of Indian social policy has been designed to afford primacy to welfare of specific groups (defined either by their ethnicity or socio-economic well being). The Indian Constitution recognizes and provides impetus to policy for enhancing welfare of groups based on their socio economic status. The Panchayati Raj Amendment to the Indian Constitution (73rd) has enabling provisions for gender, and disadvantaged groups.⁴ Households, therefore, will derive positive externalities from membership in groups as well as social networks. The electoral process is a means for specific groups to elect a representative with a congruent identity. Voting in elections will maximize returns to specific groups and lead to significant increases in welfare of individual

³ Caillaud and Tirole (2002); Snyder and Ting, (2002 and Alesina and Spear (1988)

⁴ There is in fact much confusion in the formulation of the implementation of policies related to decentralization and devolution. This has to do with whether empowerment through decentralization must be of households or of household groups (referred to also by some as community). Saxena (2011) argues that one of the pathologies of the implementation has to do with a lack of focus on community (in fact, inability to focus) and the fact that the current design allows for individual households trying to corner benefits meant for the community. Given the nature of formation of communities (always defined by Jatis in rural India), it is only natural that such pathologies are observed. Focus on group welfare in the Indian context will always lead to this outcome for individuals within communities will act in a way to maximize community welfare and capture benefits meant for other communities.

households that have either aligned themselves to these groups or are natural members.⁵ Ideally decentralization and devolution are accompanied by a significant responsibility to raise local revenues, thus permitting households to enforce commitment. In a situation where sufficient functions, as well as functionaries have not been devolved to local governments, but funds are being devolved, clientelism becomes the norm. Identity based voting may then become a significant method of enforcing commitment and for accessing funds.

The literature on voting behavior is large (Dal Bó et al., 2008, and Zhang and Laband, 2005) shows that the choice of institutions could dictate the nature of the electoral process and affect outcomes. Strategic voting is often a means resorted to by households to minimize elite capture. Such capture is sought to be achieved by all social groups requiring us to inquire as to what characteristics of a system are conducive to elite capture. The extant literature shows that elite capture may or may not always exist in systems of decentralized governance or donor-funded community based development programs. There are several explanations for such variation. Information asymmetry and inefficiency in allocation of resources are two major reasons why it is believed elite capture takes place (Laffont and Tirole, 1991). Baron (1994), and Grossman and Helpman (1996) argue that electoral competition and the guarantee to incumbents that they will succeed in getting re-elected is another determinant of the degree of elite capture. Besley and Burgess (2002) show that the distribution of disaster relief materials is more equitable and efficient in places when there is greater circulation of information through newspapers and other forms of media as opposed to places with poor economic base and low circulation of information. Bardhan and Mukherjee (2002) argue that the propensity of local democracy to be subjected to elite capture will depend on the location and the context in which it occurs. Elite capture therefore is a relative phenomenon with its degree depending *inter alia* on: (a) the extent and nature of heterogeneity of the economic space and of the households (b) the efficiency of the electoral process (c) levels of awareness of issues, (d) presence of interest groups, and (e) the design of the programs which may become the subject of capture. In general absence of an enabling social, political and economic environment can encourage elite capture. Concurrently, corruption and inefficiency appear to be a concomitant part of the elite capture problem.

⁵ During elections held in number of states in northern India, the Muslims and Yadavs would vote as a bloc with Muslims identifying themselves with Yadavs (who are Hindu but ethnically and economically backward) in order to elect a member of the Yadav community.

There are other pathologies in the system of decentralization (some of which outlined in Saxena (2011)) that could generate electoral competition and identity based voting. Barenboim and Burstyn (2008), and Khemani (2008) suggest that if decentralization is an outcome of political compulsions rather than being motivated by concerns of welfare of all households, (i.e., if development process is gerrymandered to suit the political and social compulsions of the political leaders, due pressures from range of social groups that wish to capture the financial gains resulting from development) then, the electoral process will reflect such pathology.⁶ Governance based on such decentralization will result in elected representatives attempting to channel benefits to his/her social group. Identity based voting will be an obvious consequence. Gottlieb (2009) shows that it is not the magnitude but the structure of voting that is correlated with the provision of public goods, implying that the basis for participation is more likely determined by factors related to capture of benefits.

Besley et al. (2005) suggest that both the identity of and changes to the identity of the dominant group alter allocation of public goods. The composition and preference of households belonging to the dominant group of a village can matter in determining electoral outcomes and subsequent performance of the elected government. Foster and Rosenzweig (2004) and Banerjee and Iyer (2007) show that electoral outcomes and performance of the local government reflects the composition of the village, e.g., expenditures on irrigation are more likely to take place if the elected system is represented by agricultural households.

Shu and Choudhary (2009) show that, depending on the attitude of households towards whether elected officials choose to opt for overall development as opposed to engaging in development of specific sectors or promoting the welfare of ethnically defined groups within the village, elections could lead to elite capture. If voters prefer the former or are indifferent between these two options then capture is absent.

⁶ Local elections (and in fact elections to all levels of government) in developing countries are quite often conditioned on cash transfers and announcement of welfare schemes for ethnic groups as opposed to provision of public goods, and employment generation.

Identity based voting is a second best solution adopted by households to minimize the negative effects of one's own identity and (or) identity based coalitions. If a significant source of household welfare is one's identity or, membership in ethnically defined groups, then politics that results will be parochial in nature. In parochial politics voting along ethnic lines becomes a significant tool for gaining welfare or to discipline the elected representatives. The maintained hypothesis of this paper therefore, is that identity based voting by households will reinforce group identities, and reveal the preferences of individual households. Doing so will lead to improvements in household welfare by increasing access to public goods, and other welfare programs. Our paper provides a direct test (as well as rationale for) for the increases in household welfare by measuring growth in consumption caused by increased participation in welfare programs conditioned on identity based voting⁷.

Using newly available data from rural India, we establish that identity based voting will lead to enhanced participation in welfare programs and increased consumption growth. We also show that consumption growth is retarded if households do not engage in identity based voting. The 73rd Amendment to the Indian Constitution set in motion a process of devolution of powers to local bodies (Panchayats). This data allows us a unique opportunity to investigate the impact of exogenously given factors on voting behavior and test the outcomes of such behavior on welfare program participation and consumption growth.

The plan of this paper is as follows. Section II describes the data and provides a context for the problem. Section III explains the methodology. Section IV presents the results whereas section V concludes and provides implications for policy.

II. Data and Qualitative Conjectures

⁷ One can argue that the paper is in some ways also concerned with issues in Hoyos and Cebollos (2004) and, Munshi and Rosenzweig (2008)

We use data from the Rural Economic and Demographic Survey (REDS) conducted by the National Council for Applied Economic Research (NCAER). These surveys were started in 1969 and represent a panel of 241 villages representing 17 major states of India. In addition to information included in standard multi-purpose household surveys, the REDS contains data on a member level voting patterns, social networks on which households and members of households base their decisions on as well as seek information from, Jati of the households, importance given by households and members of these households to Jati at the time of voting, and program participation. We also have detailed information on the characteristics of elected representatives, their literacy, and, nature of support that they receive from both within and outside the village.

The survey is in three parts. The listing questionnaire is a census of all the villages covered and provides detailed information of the primary and secondary occupation of the household head, net income, migration, social and economic networks, whether social discrimination was experienced, voting in elections, and Jati. The village questionnaire provides us with details of all aspects of governance including elections, Gram Sabha meetings, government programs, taxation, expenditures, number of village level shocks, amongst other variables. The household and member level information related to voting and program participation is derived from the household survey. The size of the sample in 1999 and 2006 surveys is 7474 and 8659 households respectively, of which 5885 households were interviewed in both rounds. These two survey rounds cover two Panchayat periods⁸.

In this section we briefly describe the relevant portions of this data and provide an assessment of the electoral process germane to this paper in the Panchayats. Table 1 provides us with an insight into the sample size, village, and household characteristics. The average number of households in these villages is currently at 700 and has grown by 12.46% since the previous survey. As pointed out in Foster and Rosenzweig (2004) citing the 2001 census suggest that the REDS villages are larger in terms of household population compared to an average village in India.

The household sizes have become smaller by nearly 16% and the average age of the household head has increased over the same period by 3.5 years. The household heads are better educated

⁸ One Panchayat period is approximately 5 years and starts with the election of the Pradhan. Since the household survey was completed in 2008 we are able to cover two Panchayat periods in 230 out the 241 villages. A Panchayat is an administrative unit and encompasses two or more villages. These villages act as wards-a lesser administrative unit.

than previously (though only marginally so) and the proportion of girl children that now attend schools has gone up by 30%. The changes in poverty rates are worth exploring. While overall poverty has declined by 18.3%, the magnitude of the ultra poor has registered a significant increase (though representing only 3% of all the households in these villages). The proportion of poor has declined by 25.8% while that of the affluent has registered an increase of 22% (the magnitude of non poor has gone up by 3%). Hence the village welfare as represented by the poverty head count looks promising. There is approximately 1 adverse village wide shock per year in each of the Panchayat periods and the number of household level shocks experienced by households is about the same. Inherited wealth (including land) has gone up by 26.71%. This could be attributed to the strengthening of inheritance laws during this period (Deininger et al 2012).

The per capita Panchayat expenditures on various schemes and public goods have changed. Consistent with the policies of the government at the center, the growth in per capita welfare expenditures (tied resources) have grown the most (by 77.5% and the average number of centrally sponsored schemes per village now stand at 14-a growth of nearly 15% over the two panchayat periods). The untied funds transferred to the Panchayats and spent also have grown; but only by 30.36%. Of significant concern is the magnitude of change in expenditures on public goods and on directly productive activities like agriculture. While public goods expenditures have grown by a mere 0.48% the magnitude of expenditures on agricultural programs has declined by 48.6%. This implies that households now have access to significantly large financial resources that were previously unavailable-and not necessarily related to or derived from productive activity. Such a growth in tied (program) expenditures in the context of villages with multiple Jatis can lead to certain pathologies. If selection and participation in welfare programs is constrained by Jati then household will resort to parochial politics wherein voting particularly in local elections will be determined by the Jati of the candidate. In fact we do notice in a later table in this section that such is indeed the case in Indian villages.

There is tendency for gender based regime changes in Panchayats as a result of elections (this applies to only those Panchayats that are not reserved for women under the 73rd Amendment-33% reservations is mandated and the Panchayats are randomly selected). We find that 26% of

all villages now have elected a female Pradhan in place of a male and, 22% of unreserved villages have a male Pradhan in place of a female. It will not be incorrect to conjecture that this is a result of the outcomes observed in villages where either there is (or has been in the past) political reservations for women. Deininger et al (2012 b, c) have shown that the quality of governance in general, and in particular in matters such as beneficiary selection are better in such villages. For the purpose of this paper we can posit that improved quality of governance should minimize the tendency of households to undertake second best solutions for outcomes such as being able to participate in welfare programs. The system portrays a significant degree of political interference, and presence of dynasties. 19% of all Pradhans belong to the same family (a growth of 43%). Political support and interference in matters related to Panchayats is significant. 86% of all Panchayats have Pradhans and ward members who have received support from political parties or were sponsored by these parties.

We find two interesting facets related to quality of governance that has shown a substantial increase. The number of Gram Sabha meetings has increased by 46% and the attendance in such meetings is quite high (88.2% of all members in the village having attended at least 1 meeting-a growth of 16.6% from the previous panchayat period). It is worth exploring whether such increased rates of participation or increases in number of meetings are an indicator of improved quality of governance or, an outcome of parochial politics. For instance if voting based on Jati in elections to the Panchayat is construed to be optimal by households and its members, then we are more likely to see that such households (who have voted in this manner) are likely to face less problems related to public goods or are having their problems resolved more readily by the elected representatives. As we will see in tables 6.1 and 6.2, such a conjecture is not necessarily a misplaced one.

Table 1: Sample, village and household characteristics: 1999-2006

Variables	2006(Approximately	1999(Approximately	%
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	the Current Panchayat)	the Previous Panchayat)	change
Sample Characteristics			
Number of states	17	17	0
Number of Districts	104	104	0
Number of Blocks	163	163	0
Number of villages	241	241	0
Number of households in the panel	5,885	5,885	0
Average number households in all villages	700.50	622.9	12.46
Household Characteristics			
Household Size	5.24	6.23	-15.89
Age of head	51.16	49.42	3.52
Years of Schooling of HH Head	5.11	4.46	14.57
% of male children (<15 years)	0.81	0.61	32.48
% of female children (<15 years)	0.70	0.53	30.70
Per capita consumption (Rs)	6568.28	5857.37	12.14
Poverty (Head Count)	24.98	30.60	-18.37
Ultra-Poor: $pce < \frac{1}{2}(pl)$	3.41	1.5	127.33
Poor: $\frac{1}{2}(pl) < pce < pl$	21.57	29.1	-25.88
Non-Poor: $pl < pce < 2(pl)$	52.45	50.9	3.05
Affluent: $pce > 2(pl)$	22.57	18.5	22.00
Inherited wealth	708874.5	559465.3	26.71
Number of village shocks	1.19	1.23	-3.25
Number of household shocks	1.14	1.02	11.76
%Members Voted in local election	72.60	67.80	7.08
% Members Voted in higher election	90.47	83.14	8.82
Village Characteristics			
Panchayat agriculture Expenditure (Per capita)	74.64	145.22	-48.60
Panchayat public goods expenditure (Per capita)	77.11	76.74	0.48
Panchayat untied resources (Per capita)	122.03	93.61	30.36
Panchayat expenditures on welfare programs (Per capita)	132.88	74.86	77.50
Regime change (Female to male)	22.75	17.17	32.50
Regime change (Male to female)	26.18	22.32	17.29
Re-election of Pradhan	19.74	13.73	43.77
Outside support from political party	83.26	77.68	7.18
% villages reserved for women	30.47	26.18	16.39
Average number of centrally sponsored schemes active in villages	14.13	12.31	14.78
Average number of members that attend a GS meeting	88.28	75.69	16.63
Number of GS meetings held	13.33	7.10	46.74

The profile of the elected representatives for two Panchayat periods in the different types of Panchayats is shown in table 2. There are two interesting features of the elected women representatives. First, up to 12% of all Panchayats that have never been reserved before are now

held by women (though there is an insignificant decline in this magnitude during the current Panchayat period). Second the percentage of Panchayats (reserved for women) with illiterate female representatives (Pradhans) is currently 38%. This represents a 9% increase from the previous Panchayat. During the same period, the percentage of similar type of Panchayats in which female elected representatives had at least a primary school education has shown an increase of 10% (nearly 42% of all current Panchayats reserved for women have such elected representatives)

Both the candidates and the elected members of the Panchayats report having received support from the broader caste (SC/ST/OBC etc) and narrower Jati based groups. This support is from both within and outside the villages and the Panchayat. Political influence in the local elections is present and represents a growing trend. Another feature of the elected representatives is that a majority own land and more than 20% of all Pradhans own more than 2 acres of land.

Such statistics about the elected representatives then suggests that welfare programs that have been designed to be administered through the Panchayats may be likely to be allocated along the lines of Jati, political affiliations or wealth. Therefore if households need to benefit from welfare programs and be able to be selected into these programs, they may need to undertake strategies that will enable them to be associated with one of these groups. The option that we find and explore is voting based on identity (Jati) of the candidate.

The survey asked members of the sample households the basis of voting in all types of elections. These include the Jati of the candidate, technical qualifications, knowledge of national problems, ability to redress local problems as well as professed signs of fairness and honesty. In table 3 we show the summary statistics of this part of the survey. The growth in identity based voting for the position of the Pradhan is 43.9%. That is the number of household members who stated that the Jati of the candidate (for the position of the Pradhan) was the primary determinant for voting has grown by 43.9%. The corresponding figure for the ward members is 27.8%. These figures have declined for the elections to the state elections and the Parliament at the center. Why do we see such an outcome? An easy hypothesis at this juncture is the statistic on the growth in both the number and monetary magnitude of the welfare programs and the responsibility devolved to the Panchayats to administer them. Larger financial resources are now available to the households

than ever before. If the implementation is not well regulated and is likely to be along the lines of identity or wealth, then the households would need to resort to second best options to maximize their own gains i.e., increase their chances of participation in these welfare programs.

In fact in table 4 we report another facet of voting by these households. In a majority of the households (64.05%) all members have voted based on identity. This will not only increase the chances of a candidate of their choice and preferred identity getting elected it in turn will maximize the chances of participation in welfare programs. Such a behavior then suggests that much intra household strategizing takes place before voting and that voting decisions for the most part may not be the exercising of an individual's right and rather be an expression of a collective preference of households.

Is identity based voting likely to be engaged by all households? Since this strategy could have significant economic outcomes (as well as other positive externalities) for households belonging to specific groups, then identity-based voting may become a village wide strategy that is adopted by all households and in all types of Panchayats ?We are not able to answer this question here. In table 5 we show that households that belong to Jatis whose population within the village is marginal are increasingly voting based on identity. We will see from the results in tables 6.1 and 6.2, that identity based voting indeed has grown over time, and will therefore persist. It is likely to be increasingly the preferred strategy for most households and household members. We will also see that it impacts some of the parameters of quality of governance such as problem solving by elected officials.

Table 2: Profile of elected representatives in current and previous Panchayats⁹

Elected local representative's	Unreserved	Reserved for Women	Caste based reservation
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⁹ Source: Village Schedule

Characteristics	Current Panchayat	Previous Panchayat	Current Panchayat	Previous Panchayat	Current Panchayat	Previous Panchayat
<i>Sex</i>						
Male	88.34	87.67	-	-	81.82	88.05
Female	11.66	12.33	-	-	18.18	11.95
<i>Education</i>						
Illiterate	9.68	7.37	38.41	35.00	17.22	20.63
Primary School	33.58	39.17	41.59	37.78	45.85	42.50
Secondary School	37.83	41.01	16.81	20.00	29.25	25.63
Higher	18.91	12.44	3.19	7.22	7.68	10.63
<i>Religion</i>						
Hindu	81.82	80.18	98.34	89.56	93.45	95.00
Muslim	7.33	7.37	0.41	5.49	5.66	1.25
Other(Sikh + Christian + Jain)	10.85	12.45	1.25	4.95	0.89	3.75
<i>Caste</i>						
SC/ST	11.66	11.11	33.03	32.60	-	-
OBC	37.07	43.06	46.68	46.41	-	-
OC	51.27	45.83	20.29	20.99	-	-
<i>Within the village support received from</i>						
Caste groups	84.02	82.92	88.57	85.16	86.25	82.24
Religion based groups	33.33	25.23	16.38	20.88	30.04	28.13
Wealthy person	52.05	43.69	38.86	42.31	39.04	43.75
Identity based groups (either Jati or religion)	89.23	84.93	92.57	87.36	88.75	87.06
<i>Outside support was received from</i>						
Caste groups	31.05	28.00	35.16	30.48	33.13	32.02
Religion based groups	10.50	9.38	5.49	6.67	14.04	10.63
Political party	51.14	44.77	48.35	36.76	45.63	35.09
<i>Land owned</i>						
Landless	38.36	32.07	30.27	37.36	32.44	29.38
0-2	36.07	47.52	49.56	40.11	42.36	48.13
2-4	15.98	9.04	9.03	11.54	8.26	8.75
4-10	7.31	8.75	7.96	7.69	13.64	11.88
>10	2.28	2.62	3.19	3.30	3.31	1.88

Table 3: Basis of voting by households in different levels of elections¹⁰

Major Basis for vote	Current Panchayat	Previous Panchayat
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¹⁰ Source: household schedule

	Ward Member	Gram Pradhan	MLA	MP	Ward Member	Gram Pradhan	MLA	MP
Vote based on Jati of the candidate	29.45	36.84	20.09	10.62	23.04	25.6	28.56	22.8
Technical qualifications of the candidate	13.02	15.76	35.34	35.88	13.38	16.39	34.95	35.28
Knowledge of local problems	17.04	16.06	35.01	31.89	26.92	27.28	24.31	21.49
Knowledge of National problems	9.8	9.95	37.68	42.56	9.43	10.36	37.7	42.5
Known for honesty and fairness	12.42	11.91	33.38	42.29	22.33	23.01	27.88	26.77

Table 4: Magnitude of identity based voting in households

Identity based voting		
	Current Panchayat Period	Previous Panchayat Period
Total Households	5885	5885
Total number of members of voting age	19603	17774
<i>Identity based Voting¹¹</i>		
Prop. Of households where all members have voted based on identity (in local elections only)	64.05	60.95
Prop. Of households where all members have voted based on identity (in all elections)	57.31	55.06
Prop. Of households where all members have voted based on identity (Assembly and Parliamentary elections only)	44.31	43.37

Table 5: Do marginal groups increasingly vote based on identity in the Ward and Panchayat (Pradhan) elections?¹²

¹¹ If a household voted based on castes or religion then it is counted as 1 else 0.

¹² Source: Household Schedule. #positive values show that % vote based on identity has increased while negative indicates decreasing trend over two Panchayat periods.

Jati	State ¹³	Caste group	% of village population	% of below poverty line	Within group land inequality	% change in votes based on identity			
						Ward	Pradhan	MLA	MP
Velama	AP	OBC	2.71	75.00	0.24	8.82	11.76	-0.73	-0.80
Kamma	AP	OC	1.97	14.29	0.16	0.00	3.70	-0.31	0.00
Ahir	MP	OBC	4.78	37.93	0.84	1.67	6.05	-1.41	-9.23
Kshatriya	MP	OC	2.67	7.41	0.76	18.94	7.96	-13.10	-9.46
Gond	MP	SC/ST	2.21	47.76	0.74	18.74	8.13	-9.30	-22.62
Nai	MP	OBC	1.58	54.17	0.72	1.17	4.07	-3.85	-0.85
Gounder	Kerala	OC	2.06	18.52	0.13	9.85	1.46	-0.32	-9.85
Idiga	KA	OBC	3.24	41.46	0.29	0.00	1.36	-1.30	0.00
Muslim	KA	OBC	1.5	15.79	0.34	15.23	6.59	4.13	-2.45
Teli	MH	OBC	6.14	18.63	0.44	0.00	0.00	-6.01	-12.52
Mana	MH	SC/ST	2.41	32.5	0.52	7.38	4.50	-2.77	-13.33
Gavali	MH	OBC	2.23	64.86	0.39	0.00	1.66	-2.78	-2.78
Ahir	GUJ	OBC	3.73	37.65	0.19	5.64	1.66	-3.87	-11.56
Chamar	RJ	SC/ST	10.5	43.82	0.5	2.77	1.20	0.61	-3.65
Kumhar	RJ	OBC	3.66	38.71	0.56	12.14	2.44	-10.25	-1.70
Suthar	RJ	OBC	1.85	51.06	0.65	17.42	10.00	-11.83	-17.05
Chamar	HAR	SC/ST	7.26	22.92	0.63	5.62	0.27	-1.08	-2.22
Kumhar	HAR	OBC	2.49	36.36	0.6	15.00	5.91	-2.36	-14.36
Mali	HAR	OBC	2.34	48.39	0.66	22.00	13.42	-19.91	-1.76
Raisikh	Punjab	OBC	6.83	32.89	0.67	5.00	1.54	-4.87	-15.19
Ahir	UP	OBC	12.83	43.23	0.57	5.23	6.53	-0.35	-0.19
Rajput	UP	OC	6.64	37.16	0.72	2.30	10.73	-2.37	-7.21
Jat	UP	OBC	2.77	9.89	0.49	0.09	2.47	-6.21	-6.05
Pasi	UP	SC/ST	1.43	70.21	0.68	20.11	30.21	-7.18	-0.14
Kulhaiya	Bihar	OBC	8.1	75	0.57	6.38	4.86	-1.22	-6.42
Chamar	WB	SC/ST	1.94	48	0.39	0.65	1.20	-1.77	-2.01
Teli	Orissa	OBC	2.13	25	0.52	6.30	6.30	-1.96	-3.04
Bauri	Orissa	SC/ST	1.45	94.74	0.62	0.00	7.69	-7.14	-7.14
Nadar	TN	OBC	6.48	26.42	0.22	3.93	1.57	-3.61	-5.71
Mudaliyar	TN	OBC	3.79	9.68	0.5	9.18	9.18	6.96	6.33
Krishnanvagai	TN	OBC	2.93	45.83	0.23	15.56	22.35	0.35	-9.52

¹³ States includes Andhra Pradesh (AP), Madhya Pradesh (MP), Kerala, Karnataka (KA), Maharashtra (MH), Gujarat (GUJ), Rajasthan (RJ), Haryana (HAR), Punjab, Uttar Pradesh (UP), Bihar, West Bengal (WB), Orissa, and Tamil Nadu (TN).

III. Empirical strategy

a) Identity Based Voting and Outcomes Related to Governance

Reservations in favor of women are randomly assigned to villages while reservations based on caste or tribe depends on the population shares of the respective groups. Random assignment implies that OLS regressions of the outcome variables against a reservation dummy for women and controls will yield unbiased and consistent estimates of the impact of reservations. Formally, with subscripts i , v , t denoting individuals, villages, and time periods and the superscript j standing for specific issue of relevance, we estimate

$$Y_{ivt}^j = \beta_v^j + \beta_1^j R_{vt} + \beta_2^j X_{ivt} + \beta_3^j D_t + \varepsilon_{ivt}^j \quad (1)$$

Where Y_{ivt}^j is the outcome variable of interest, β_v denotes a village or state fixed effect,¹⁴ R_{vt} is a dummy for reservation of the Pradhan position that takes the value of one if the Pradhan position in village v at t was reserved to women and zero otherwise, X_{ivt} is a vector of household and individual characteristics, D_t is a vector of dummies for GP terms, and $\beta_1, \beta_2, \beta_3$ are parameters to be estimated with main interest in β_1 .

A second hypothesis is that reservation will increase the quality of political processes. This has been established elsewhere in Chattopadhyay and Duflo (2004), Besley et.al (2005), Iyer et.al (2010), Krishnan (2007), and, Ban and Rao (2008). Deininger et al (2012 a, b) test for longer term impacts, i.e. whether participation and the quality of the political process in general are affected even after reservation of the pradhan position has lapsed. This could be interpreted as a one-off reservation facilitating participation of hitherto marginal groups in a way that could, by broadening the set of participants, change the nature of the median voter and thus change the nature of the political equilibrium possibly in a permanent way.

What is also not clear is whether within the context of political reservations with all of its attendant indicators of improved quality of governance, the benefits of participation in the political process will accrue to all segments of the population. If they do not then if households

¹⁴ For the regressions where data from multiple Panchayat periods are available, we use village fixed effects.

engage in second best strategies such as identity based voting, could they “capture” a part of these benefits? Identity based voting would then be a second best solution adopted by households to minimize the negative effects of one’s own identity and (or) identity based coalitions. If a significant source of household welfare is one’s identity or, membership in ethnically defined groups, then the politics that results will be parochial in nature. In parochial politics voting along ethnic lines may become a significant tool for gaining welfare or improving the quality of governance.

Therefore a third hypothesis is to test whether, identity based voting by households will reinforce group identities, and get officials from one’s own identity group elected. This will lead to improvements in household economic welfare by increasing access to public goods and other welfare programs. It may also shift benefits away from other groups.

Our empirical strategy therefore first explores the impact of identity based voting in the context of political reservations on some of the indicators of the quality of governance. It next provides a direct test for the increases in household welfare by measuring growth in consumption caused by increased predicted participation in welfare programs conditioned on identity based voting.

Formally, this is estimated by including of lagged reservation dummies (i.e., R_{t-1}) to estimate

$$Y_{ivt}^j = \beta_v^j + \beta_1^j R_{vt} + \alpha_2^j R_{vt-1} + \delta^j \sum_{t=1}^2 R_{vt} * D^F + \gamma^j \sum_{t=1}^2 R_{vt} * D^F * IBV_{it} + \beta_2^j X_{ivt} + \beta_3^j D_t + \varepsilon_{ivt}^j \quad (2)$$

The interaction terms are introduced first explore the outcomes of a specific vulnerable group (in this case women) and the impact of second based strategies (identity based voting) adopted by such groups.

b) Identity Based Voting and Economic Outcomes

We posit that changes in identity based voting, consumption growth and program participation are jointly determined and endogenous to each other. Therefore, a three stage estimation strategy

is adopted presuming the existence of a linear system of M equations with jointly dependent and predetermined variables.

$$y_i = Y_i \gamma_i + X_i \beta_i + u_i \quad i=1, 2 \dots M. \quad (3)$$

$$y_i = Z_i \delta_i + u_i, \quad Z_i = (Y_i X_i) \quad \delta_i = \begin{pmatrix} \gamma_i \\ \beta_i \end{pmatrix} \quad (4)$$

where the T-vector y_i contains the observations on the i th dependent variable to be explained by the i th structural equation; $Y_i (T \times m_i, m_i < M)$ less than or equal M contains observations on jointly dependent variables included as explanatory variables in the i th equation, $X_i (T \times l_i, l_i < A)$ less than or equal A is the matrix of predetermined variables included in the i th equation, γ_i and β_i are corresponding vectors of unknown parameters, u_i is a T-vector of disturbances satisfying

$$\begin{aligned} E(u_i) &= 0, \\ E(u_i u_j') &= \sigma_{ij} I_T, \quad i, j=1, 2 \dots M. \end{aligned} \quad (5)$$

The distribution of the disturbances is supposed to be independent of the predetermined variables in the system, the reduced form is assumed to exist and the equations are either just identified or over identified (Kapteyn and Fiebig, 1981).

i) Estimating the Determinants of Identity Based Voting

Identity based voting may be an endogenous variable with some of the outcomes of interest and therefore we need to predict. It is caused by a number of factors. Significant among these are the costs of association with social and information networks. Identity based voting will increase if the cost of breaking any or both of these networks for a given household is high. Using similar principles, Foster and Rosenzweig (2004) have shown that rates of migration from a village are a function of the mutual insurance derived from caste based networks. They show that is the benefits from breaking with such networks are low then migration will take place. We can very

easily use this finding to show that if a significant source of household economic welfare is its Jati identity or, membership in groups defined by Jati, then politics and in particular that results will be parochial in nature. Identity based voting by households during elections for the Pradhan will reveal the role of social networks. Membership in such networks provides positive externalities to households and individual household members. If households are least diversified in terms of source of information then breaking with the network is “costly”. Hence a household (or a household member) belonging to a specific Jati that relies exclusively on other households (or household members) belonging to the same Jati for mutual insurance, and information, is most likely to vote based on identity.

The strength of social networks for a household in the village is measured as follows¹⁵.

$$CI_{1i} = SI_i / 9 \quad (6)$$

Where CI_{1i} is a social network index of a given household i and SI_i is the number of the households of the village identified by household i as being socially identical (i.e. those households belonging to same Jati) who can be relied upon for mutual insurance and social support. The maximum of such households in the data is 9. If the CI_{1i} takes on value 1 then it is implied that the household i will rely on households that belong to its own Jati for mutual insurance and ethnic coherence and, the cost of leaving the network is higher, the larger the index.

A second cost index for the household is also identified. The strength of the information index is measured as follows¹⁶.

$$CI_{2i} = SJ_i / 34 \quad (7)$$

¹⁵ Each respondent at the time of listing was asked three sets of questions. “identify 3 households in descending order of preference from this village from whom you can borrow money during times of a family medical emergency”, identify 3 households from whom you can borrow vegetables in case you need them for cooking” and, identify 3 households whom you wish to be your immediate neighbor”. The index is constructed using 9 possible responses from each household.

¹⁶ A total of 34 items (this includes information on health, education, employment, welfare programs, credit, marketing channels, prices, extension, social issues, and local and national politics) were identified on which a household member will seek information. Such information can come from members of own Jati within the village or any other household at random.

Where CI_{2i} is the information network index and SJ_i is the number of households of the same Jati that can be relied upon to provide information on a range of issues such as healthcare, education, conflicts etc. The maximum of such households observed in the data is 34. If CI_{2i} takes on value 1, then it implies that the source of information for household i is originating entirely from a network based on its own Jati and, the cost of leaving the network is the larger.

Both CI_{1i} and CI_{2i} are measures of costs which would arise if a person were to lose the network, for example by choosing not to use identity based voting. They uniquely identify changes in identity based voting. Preferences for membership in such networks are inherited by the households and therefore are exogenous. We estimate change in identity based voting as follows:

$$\Delta IBV_{it} = a_0 + b_1 CI_{1it} + b_2 CI_{2it} + c_1 \Delta RC_1 + c_2 \Delta RC_2 + d_1 S_{it} + \varepsilon_{it} \quad (8)$$

Where, ΔIBV_{it} is change (across two panchayat periods) in the number of households who engage in identity based voting during local elections, CI_{1it} is the social network and CI_{2it} is the information network, ΔRC_1 is the regime change associated with gender of the Pradhan (between the previous Panchayat and the Panchayat two periods ago), RC_2 is a similar regime change associated with the Jati of the Pradhan, S_{it} is the vector of all the other explanatory variables such as predicted participation in gram sabha meetings, support from political parties, whether candidate was standing for re-election.

We would expect that if a regime change over the past two Panchayat has lead to a congruence of the Jati of the elected representative then identity based voting will persist. However we do not have any a priori hypothesis about the gender based regime changes in the past and expected changes in identity based voting.

ii) Estimating Change in Per Capita Consumption

Change in household's economic welfare is measured by changes in its per capita consumption. This is estimated as follows.

$$\Delta PC_{it} = \alpha_0 + \alpha_1 \Delta \widehat{W}_{it} + \beta \Delta IBV_{it} + \lambda_k X_{kit} + \mu_{it} \quad (9)$$

Where, ΔPC_{it} is the change of per capita consumption expenditure, \widehat{W}_{it} is predicted wealth, ΔIBV_{it} is change in identity based voting, X_{kit} is a vector of exogenous variables that includes public expenditures on agricultural programs, welfare programs, village untied grants, village level shocks, household level shocks, education of head of the household and, change in household size. μ_{it} is the random error.

The unique identifier for this equation is the predicted changes in household wealth. Change in wealth is predicted using the method for predicting household splits as suggested in Foster and Rosenzweig (2001)¹⁷.

iii) Change in Participation in Welfare Programs

Change in number of welfare programs participated in is estimated as follows.

$$\Delta WP_{it} = \pi_0 + \varpi_1 I_{it} + \gamma_m D_{mit} + \mathcal{G}_{it} \quad (10)$$

Where, ΔWP_{it} is the change in the number of welfare programs participated in by the households, I_{it} change in the proportion of households members of a household voted based on identity during local elections, D_{mit} is a vector of variables that includes, identity based voting interacted with political reservations for women, political reservations for women, poverty status, growth in agricultural programs, growth in public goods, growth in untied resources and growth in the number general welfare programs. The unique identifier for this equation is the change in the number of welfare programs in the village.

¹⁷ Here we estimate predicted change in household's wealth. Changes in household wealth are often a consequence of household splits. Predicted household splits adequately predict changes in wealth (Foster and Rosenzweig, 2001). We predict the change in wealth as follows.

$$\Delta W_{it} = \kappa_0 + \phi_j S_{jit} + v_{it}$$

Where, i indexes households, j the variables and t is time, ΔW_{it} is the change in household's wealth, S_{jit} is the vector of variables that predict whether a household will split. It includes age of head of the household, change in variance and mean of education of members of household, number of children whose age is less than 15 years, inherited wealth at the beginning of the period (1999), dummies for whether father is co-resident at beginning and at end of the periods (1999 and 2006), dummies for whether both brothers and sisters are co-resident at the beginning and end of the period (1999 and 2006) and, v_{it} is the error term.

The rationale for the use of some of the variables needs amplifying. It has been shown in Deininger et al (2012 a, b) that political reservations for women lead to the empowerment of disadvantaged groups in general and in particular of women. This then enables the members of such groups to approach elected representatives for raising complaints, participate actively in Gram Sabha meetings etc. However the results show that the ability of getting problems resolved when raising complaints is insignificant. We also do not know whether disadvantaged groups like women for example were able to approach these elected representatives on account of revealed second best strategies. Are only those women who voted based on the Jati of the elected representatives approaching the elected representatives? Are the problems then lower only for such groups? There are no answers to such questions in Deininger et al (2012 a, b). We therefore use both political reservations as well as the interaction of identity based voting with political reservations as explanatory variables.

Does it matter that all members of a household vote based on the same strategy during local elections? We saw in section 2 that there has been a substantial increase in the financial resources available at the village level. If targeting is inadequate or poor, then households need to evolve strategies to gain the benefits of this financial devolution. If there are gains from parochial politics then, a significant source of household economic welfare will be its Jati identity or, membership in groups defined by Jati. It is therefore important for household members to pool their voting strategies in order to maximize the gain from parochial politics. The variable I_t therefore captures the effect of vote pooling by households.

IV. Results

Broadly the results can be summarized in the following way. We show that IBV enables vulnerable groups like women reduce problems associated with governance achieve greater degree of problem resolution through the elected representatives. If the intention of policy is to empower women, but political reservations of Panchayats does not do it by itself, then the women have to overcome this deficiency in the political system by resorting to the second best solution of IBV. We find that the policy or reservation interacts positively with IBV to achieve

the policy maker's intent. We also show that improved access to programs result in increases to the household level incomes. Both decentralization in general and, political reservations in particular enable households to participate more in the process of governance. We find that in general participation in Gram Sabha meetings go up but it is not clear whether this participation could be channel for capturing private benefits due to better information. The fact that participation in the GS leads to a reduction in IBV can be interpreted as such participation being an alternative strategy to IBV, and therefore a substitute, so that IBV can be reduced when you participate more in the process of governance. The fact that participation in Gram Sabha meetings has only a small impact on consumption would mean that participation in such meetings do not necessarily lead to capturing of significant private benefits and that it is not a strong substitute to IBV. That is as it should be, because the task of the GS is to ensure transparency and proper targeting, not selectively allocating benefits to those who participate, even though that may happen too, if only because the participants in such meetings are better informed than the others.

a. Identity based voting and governance outcomes

The results of estimating equation 2 are shown in tables 6.1 and 6.2. The results in table 6.1 describe the impact of identity based voting by women on whether they were adversely affected by some of the problems associated with governance. These include faulty hand pumps (for drinking water), non functional health center in the village, school building needing repairs, receipt of all of the benefits due under the welfare programs, and beneficiary selection. In currently reserved Panchayats, problems are between 11 and 22 percent less in seeking benefits, school quality and water supply respectively. For all five types of problems, for females in currently reserved Panchayats the problems reported are also significantly less than for men by between 12 and 34 percent. And finally for all types of problems they are even less if the women voted based on identity in the previous elections.

For resolution of problems with school quality, seeking benefits under government schemes, and adverse beneficiary selection, the outcomes for both men and women are significantly better in Panchayats reserved for women by between 12 and 21 percent, and more so for women than men for the last two problems. For all five problem solving variables the coefficients of the three way

interaction of reservation, being a female, and voting based on identity are highly positive and significant, suggesting that IBV has its strongest impact for women when the Panchayat is also reserved for women. We found elsewhere (in Deininger et al (2012a, and b) as well as in the chapter on gender and political reservations that the impact of such reservations on problems solving by the elected representatives is still insignificant. Groups that engage in IBV can then ensure that elections go in a specific way and that the problems are resolved better. If we look closer at the results we find that IBV has impacted significantly, the outcomes germane to income generation at the household level viz., problems associated with seeking benefits and targeting.

The REDS data show, that a significant number of households who are participants in welfare programs do not receive all of the benefits due to them. Table 6.1 shows that in villages that are currently reserved such problems are 10.6% less compared to the situation in unreserved villages (but the level of significance is only 10%). In villages that were previously reserved even though the magnitude of these problems is lesser, the coefficient is insignificant. We also tested for the long term effects of political reservations on such problems ($\beta_1 + \beta_2 = 0$) and found that over time there will be improvements that will accrue to households with respect to receiving all benefits due to them from welfare programs. The hypothesis of no persistence of benefits is rejected only at 10%. The impact of political reservation on accuracy of targeting and beneficiary selection has not shown much change. In fact the impact has become insignificant over time.

However political reservations have impacted vulnerable groups such as women more than the average household. For example in Panchayats that are currently reserved, women in such villages are affected 20.8% less compared to all others in these and other villages when it comes to receiving all of the benefits under the welfare programs. The magnitudes have however become smaller. This however is not the case in the case of beneficiary selections where women have significantly benefitted over time compared to all other groups. While the literature on political reservations stops at this point, we wish to explore whether by engaging in second best strategies vulnerable groups such as women can benefit to a larger extent? From table 6.1 we find that with respect to these two aspects of governance, identity based voting by women in reserved Panchayats puts them at an even greater advantage compared to women in unreserved Panchayats as well as all other groups. For example in the case of beneficiary selection, the impact is 57.4% compared to 11.8% during the current Panchayats and in the case of receiving

all of the benefits under the welfare programs it is 55.2% compared to 22.5% and, these gaps have widened between the two panchayat periods. One can conclude from this section that in general identity based voting can give additional avenues for those groups such as women, that engage in such strategies to increase not only their economic welfare relative to all others but also of their respective households to which they belong.

The literature cited earlier suggests that the evidence on effective problem solving by the elected members is weak. While political reservations in general make households better off in reserved villages relative all other villages (for example in matters related to resolving problems of beneficiary selection, households in currently reserved villages are 14.2% better off compared to households in all other villages-a significant increase from the previous panchayat period) table 6.2 shows that adoption of second best strategies by households could significantly help. For example the gap in the magnitude of effective problem solving (related to beneficiary selection) for women who engaged in IBV compared women who did not in Panchayats currently reserved is 54.4%. This difference was 40.3% in the previous Panchayat.

What these results show is that while Political reservations could improve the quality of governance on an average, the evidence that the benefits such improvements could accrue to all, is weak. Under political reservations certain vulnerable groups are better off than others and also better off than before. Of significant interest is the extent to which IBV will help magnify the benefits to these disadvantaged groups even in the context of political reservations. The results also suggest that that the benefits of IBV will persist (for example both $\alpha_1 + \alpha_2 = 0$ and $\alpha_1 + \alpha_2 = \beta_1 + \beta_2$ are rejected). Households that voted based on identity in a previous period are likely to repeat and the benefits of such repetitions become magnified. Perhaps this is to overcome some of losses in the quality of governance after the lapse of reservations. What can also be inferred from tables 6.1 and 6.2 is that IBV strategy is likely to be adopted by segments of the village over time.

Hence if identity based voting will help in overcoming some of the problems of governance related to the administration of welfare programs, then it is only logical to expect that such a strategy will help achieve greater participation. Since participation in welfare programs leads to consumption growth and as a consequence improves the economic welfare of households, second best strategies are likely to become the norm in the context of problems related to

governance in general and specifically germane to beneficiary selection, and transfer of welfare entitlements. In the next section we present results of the 3 stage estimation of IBV, consumption growth and program participation.

b. Economic consequences of Identity based voting

The results of estimating the system of equations 3 and 4 at the household level are described in table 7. The chi square statistics are significant suggesting that the variables in each equation are jointly significant. We also show via the Hansen-Sargan statistic that the equations are over identified and jointly determined. At the bottom of the table we show that the change in participation in welfare programs for those who voted based on identity is 23% while it is 5% for those that did not vote based on identity. Increased participation due to identity based voting also contributes to growth in consumption-by 8%. The details of the results are explained below. We will selectively discuss those results that can be addressed by policy.

i) Determinants of IBV

Higher costs of leaving networks trigger IBV, as measured by both cost indices. Even though these coefficients are small they are nevertheless significant at 1%. The impact of social network is slightly larger compared to information network. If households derive benefits from membership in social networks defined by Jati then it is quite likely that they will want to elect Pradhans who will maximize the benefit of such networks. Regime changes can lead to households increasingly voting based on Jati. Regime changes can be both “positive” and “negative” i.e., elections that lead to the election of a Pradhan who largely represents the preferences of the voter brings about a positive change. We find that a regime change that leads to the election of a female pradhan leads to a 2.4% increase in IBV while change to a male pradhan leads to a 2.9% increase (but less significant). Could these regime changes have been brought about through IBV? Therefore do these newly elected representatives represent parochial outcomes? Given that the cost indices are both positive, it is in the interest of the household to ensure that there is congruence between its own Jati and that of the elected representative irrespective of the gender. Therefore it is quite likely that these regime changes themselves are due to IBV in the past and therefore such patterns of voting will continue and grow into the future. This finding is of significance consequence for any reforms that might be

aimed at the PRIs or the electoral processes at the level of the Panchayats. If much of the welfare programs are to be targeted at the households using the elected representatives then, these findings suggest that the likelihood of specific groups often defined by Jati vote to increase access to the benefits is quite high.

Two other findings are worth exploring. We find for example that increased participation in Gram Sabha meetings leads to a 1.3% decrease in the incidence of IBV. It has been stated elsewhere in the literature that increased participation in such meetings are a sign of empowerment and better functioning of democracy. We also find in Deininger et al (2012 a, b) that increased participation in Gram Sabha meetings are a means to access critical information regarding programs and lesser reliance on informal sources of information. The negative coefficient of attendance in Gram Sabha meeting therefore could mean those voters who participate in such are more empowered and therefore have less of a need for resorting to identity-based voting. Table A.2 provides some additional insights into the nature of participation in such meetings. We find for example that households who perceive the Jati of the Pradhan to be aligned to their own attend 3.82 more meetings compared to other households.

Could one therefore conjecture that the Gram Sabha meetings are a means for the Pradhan to improve the power of his own coalition?¹⁸ For example would such participants be less likely to vote in local elections? Our data shows that 6% of households who attended Gram Sabha meetings and whose Jatis were similar to that of the Pradhan opted out of local elections (but did not do so for the elections to the state and the central governments). This finding then suggests that such meetings themselves might be accessories to parochial provision of benefits. However the finding that participation in Gram Sabha meetings reduces the need for second best strategies is not necessarily an indicator of poor quality of governance. In fact in tables 6.1 and 6.2 we found that even under conditions of political reservations (often cited as reforming the quality of local governance) IBV puts those groups engaging in such strategies at an advantage.

¹⁸ This conjecture is not borne out to be true. It can be inferred from the results that the distribution of benefits are not necessarily equal. They tend to get more equalized if households engage in strategies such as IBV. However as we will see later the impact of participation in gram Sabha meetings seem to provide negligible private benefits to households in the form of increases in consumption.

The other finding that reflects conditions inimical to the mandates of the 73rd amendment is both the presence of significant outside support from political parties and, the pathology it in turn creates for the electoral process in villages. Political parties (both national as well as regional) will alter the economic agenda of the local governments. If there is political interference in the election of the Pradhan or in the allocation of resources then transfers that Panchayats receive could entirely be driven by political motives rather than any local developmental considerations. It is also possible that the development agenda of the village is distorted, to suit the political objectives. Even though it can be argued that in a democracy that this is a natural outcome, the mandates of the 73rd amendment do not subscribe to a Pradhan or a ward members being aligned to any political party. Reforms must be carried out to remove political interference at the time of elections or even afterwards.

ii) *Determinants of Change in Per Capita Consumption*

In tables 6.1 and 6.2 we found that the effect of repeated IBV will be beneficial to households. If households continue to engage in IBV even after reservations lapse then the benefits are perpetuated¹⁹. It has been shown that IBV is a significant predictor of households escaping chronic poverty. Since it increases expected consumption, households that engage in IBV are less vulnerable and are therefore increasingly likely to transit out of poverty. In order to understand the pathway of these impacts, we posit that increase in expected consumption is made possible by IBV leading to increased participation in welfare programs. Our results show that per capita consumption increases out of persistent IBV, with both the coefficients of changes in IBV between the last and the current Panchayat period, and between the second to the last and the last Panchayat period statistically significant and positive. For example change in IBV lagged by two periods into the past leads to a 4.7% increase in the per capita consumption and change in IBV in the between the current and the past elections increased per capita consumption by 2.5%. This then suggests that persistent IBV is beneficial to households (and at an increasing rate over time). We have stated earlier that the hypothesis behind the empirical strategy is that IBV, per capita consumption and, participation in welfare programs are endogenous and jointly determined. Hence there are a number of feedback effects between IBV, increases in per capita consumption and increases in participation in welfare programs which are highlighted by these results.

¹⁹ We posit that if there are changes to the quality of governance after the period of reservations lapse then IBV can help households to overcome such adverse changes.

The results also show that increases in government programs will have positive effect on growth in per capita consumption. For example agricultural programs contribute to an increase in agricultural productivity. This in turn affects income leading to growth in consumption, here measured with a small elasticity of 0.007, or under one percent. To the extent that income drives consumption increases in governments programs as well as untied grants to the panchayat will help for all of these will lead to increased incomes either directly or indirectly through mechanisms like growth in agricultural productivity, and, labor productivity. Untied expenditures and welfare expenditures have impacts on consumption with elasticities of 0.4 percent and 0.3 percent, while expenditures on public goods do not increase private consumption.

The impact of increased participation in gram sabha meetings on per capita consumption growth is significant. But the magnitude of impact is small. Should this be a matter of concern?²⁰ This concern stems from the results that the Gram Sabha meetings are not adequately able to address mechanisms of allocation of benefits and resources (in Deininger et al 2012 a). That is, Gram Sabhas are not able to provide all households with efficient avenues to discuss problems germane to welfare programs. It has been found that participation in Gram Sabha is an important instrument for transiting out of poverty. This is only possible if participation in such meetings will lead to increases in expected consumption through improved access to information on welfare programs as well as being able to access welfare programs. However if such meetings are being captured by specific groups then benefits of such an institution as the Gram Sabha does not accrue to all members of the village. Our results show that consumption growth due to participation takes place but the impact is nearly inconsequential. Therefore the magnitude of capture through Gram Sabha meetings is inconsequential. Reforms though must still be put in place to adequately regulate Gram sabha meetings²¹.

iii) Determinants of Change in Participation in Welfare Programs

The first finding of significance is that Political reservations do not necessarily lead to large increases in program participation. Even though we know from tables 6.1 and 6.2 that for three

²⁰ If participation reduces poverty and increases consumption by a little bit, it may be because GS participation does not lead to a private benefit, but perhaps to a collective benefit. In an ideal democracy, the GS would insure that allocation of benefits is well targeted and not captured by special groups, so you should not expect private benefits to emerge out of GS participation.

²¹ These types of regulations are already there, but they may not be adhered to. This may be for lack of capacity, or political distortions.

of the 5 issues studied the households in reserved villages are better off in terms beneficiary selection, the magnitudes are not very large. However women and households in such villages that engage in identity based voting during local elections are able to increase their benefits. This then suggests that the environment under political reservations also encourage second best strategies and such solutions to improve the quality of governance and of the political process have not necessarily yielded all of the expected²² results.

A second result of relevance to policy is that growth in the number village level programs increases the change in participation welfare programs by 2.1%. It is interesting to disaggregate by the type of program and then examine their effects. While by themselves increases in specific programs have no impact on the change in participation in welfare programs, (the results are not reported here), households that vote based on identity however are able to take advantage of these increases. For example growth in village level agricultural extension programs when conditioned on IBV leads to a 2.3% increase in the change program participation compared to those that did not vote based on identity. To the extent that this can be interpreted as an attempt to capture private benefits through a democratic process it is a cause for concern for policy since these programs are designed for all classes of households and the benefits are not to be derived through strategies like the IBV.

A third result though not directly related to policy is the fact that households increasingly are voting as a unit (pooling). We had stated earlier that if there are gains from parochial politics for households and Jati is a significant source of household economic welfare then it will be important for household members to pool their voting strategies in order to maximize the gain from parochial politics. We find that households that do so experience a small but significant increase to program participation (1.4%).

²² If the intent of policy is to improve participation of women, and resolution of problems, then the IBV is a successful second best strategy of the women to achieve this policy intent. Therefore quality of governance is improved in that case.

Table 6.1: Insuring adverse effects of service provision through identity based voting

VARIABLES	Were you affected by such issues? (Yes=1;N0=0)				
	<i>Water supply</i>	<i>Health center is not functioning properly</i>	<i>School quality</i>	<i>Seeking benefits under govt. schemes</i>	<i>Adverse Beneficiary selections</i>
Currently reserved to woman	-0.215*** (0.0498)	-0.0714 (0.0503)	-0.147*** (0.0503)	-0.106* (0.0558)	-0.0724 (0.0480)
Currently reserved*female member (α_1)	-0.338*** (0.0595)	-0.248*** (0.0638)	-0.246*** (0.0642)	-0.208*** (0.0745)	-0.118* (0.0606)
Currently reserved*female member*voted based on Identity(t-1) (β_1)	-0.792*** (0.0920)	-0.688*** (0.120)	-0.544*** (0.113)	-0.552*** (0.135)	-0.574*** (0.110)
Previously reserved for females	-0.164*** (0.0544)	-0.0122 (0.0545)	-0.115** (0.0544)	-0.0473 (0.0573)	-0.0908* (0.0538)
Previously reserved*female member(α_2)	-0.351*** (0.0718)	-0.0670 (0.0731)	-0.0698 (0.0775)	-0.225*** (0.0854)	-0.0372 (0.0745)
Previously reserved*female member*voted based on Identity(t-2) (β_2)	-0.614*** (0.0910)	-0.504*** (0.106)	-0.399*** (0.101)	-0.399*** (0.128)	-0.386*** (0.0981)
Constant	-0.463*** (0.178)	-2.601*** (0.279)	-2.160*** (0.239)	-1.367*** (0.225)	-0.580*** (0.176)
LR Chi2	12032.07***	9641.35***	10450.44***	8918.53***	13054.03***
Village fixed effect	Yes	Yes	Yes	Yes	Yes
$\alpha_1 + \beta_1 = 0$	106.97***	47.78***	37.17***	24.36***	30.61***
$\alpha_2 + \beta_2 = 0$	68.43***	19.49***	13.31***	16.28***	11.67***
$\beta_1 + \beta_2 = 0$	135.77***	63.08***	42.75***	28.64***	47.16***
$\alpha_1 + \alpha_2 = \beta_1 + \beta_2$	17.42***	19.90***	10.09***	4.94**	18.05***
Observations	47920	47920	47920	47920	47920

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 6.2: Identity based voting and problem resolution

VARIABLES	Was the problem solved by the elected official? (Yes=1;N0=0)				
	<i>Water supply</i>	<i>Health center is not functioning properly</i>	<i>School quality</i>	<i>Seeking benefits due under govt. schemes</i>	<i>Adverse Beneficiary selection</i>
Currently reserved to women	-0.0182 (0.0492)	0.0695 (0.0575)	0.118** (0.0507)	0.215*** (0.0618)	0.142*** (0.0507)
Currently reserved*female member(α_1)	-0.00206 (0.0599)	0.0193 (0.0717)	-0.00843 (0.0635)	0.627*** (0.0744)	0.144** (0.0641)
Currently reserved*female member*voted based on Identity(t-1) (β_1)	0.187* (0.0955)	0.623*** (0.104)	0.312*** (0.102)	1.240*** (0.108)	0.698*** (0.101)
Previously reserved to woman	-0.195*** (0.0540)	0.112* (0.0591)	0.132** (0.0556)	0.141** (0.0675)	0.0468 (0.0571)
Previously reserved*female member(α_2)	0.00437 (0.0722)	0.157** (0.0782)	-0.0868 (0.0784)	0.303*** (0.0924)	0.166** (0.0789)
Previously reserved*female member*voted based on Identity(t-2) (β_2)	0.269*** (0.0951)	0.432*** (0.105)	0.211** (0.0933)	0.801*** (0.107)	0.569*** (0.0939)
Constant	-0.697*** (0.175)	-2.664*** (0.274)	-2.204*** (0.224)	-2.350*** (0.273)	-1.205*** (0.190)
LR Chi2	12381.90***	9312.08***	7865.58***	6553.95***	10086.93***
Village fixed effect	Yes	Yes	Yes	Yes	Yes
$\alpha_1 + \beta_1 = 0$	2.70*	26.03***	6.41***	203.19***	50.08***
$\alpha_2 + \beta_2 = 0$	5.18**	20.07***	1.02	59.41***	34.42***
$\beta_1 + \beta_2 = 0$	12.99***	59.19***	16.36***	207.12***	99.48***
$\alpha_1 + \alpha_2 = \beta_1 + \beta_2$	6.57***	20.47***	10.89***	27.41***	26.39***
Observations	47920	47920	47920	47920	47920

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 7: Change in per capita consumption with identity based voting

Variable	Coefficient	S.E.
Change in identity based voting		
Cost index1 (social network)	0.001***	0.0002
Cost index2 (information network)	0.0002***	0.00003
Regime Change (Male to Female)	0.024**	0.011
Regime Change (Female to male)	0.029*	0.016
Predicted Participation in GS meeting	-0.013***	0.003
Candidate Supported by political party	0.045***	0.015
Re-elected Pradhan	0.041***	0.018
Constant	0.211***	0.040
Chi2	330.90***	
Change in per capita consumption		
Change in identity based voting(current and previous)	0.025**	0.013
Change identity based voting (between previous and period before)	0.047***	0.012
Predicted change in wealth	0.045***	0.008
Change in public expenditures on agricultural program	0.007***	0.002
Change in public expenditures on public goods	0.001	0.002
Change in village untied expenses	0.004**	0.002
Change in public expenditures on welfare program	0.003**	0.002
Number of village level shocks between 1999 and 2006	-0.001***	0.0002
Change in number of household level shocks	-0.215***	0.058
Predicted Participation in GS meeting	0.006**	0.003
Change in household age	0.001***	0.0002
Change in household size	-0.435***	0.011
Change in years of education	0.0001**	0.00003
Constant	-0.129***	0.035
Chi2	1891.67***	
Change in participation in welfare programs		
Women reserved in current panchayat	-0.035***	0.014
Women reserved in previous panchayat	-0.001	0.014
Women reserved in current panchayat*Identity based voting	0.002***	0.0003
Women reserved in previous panchayat*Identity based voting	0.0004	0.0003
Change in prop. of household who voted based identity(pooling) ²³	0.014***	0.002
Poor (2006)* Prop. of household who voted based identity	0.002***	0.0002
Poor (1999)* Prop. of household who voted based identity	0.001***	0.0002
Growth in agricultural program* Change in prop. of household who voted based identity	0.023**	0.011
Growth in public goods* Change in prop. of household who voted based identity	0.029***	0.010
Growth in untied resources * Change in prop. of household who voted based identity	0.027***	0.009
Growth in welfare program* Change in prop. of household who voted based identity	0.015	0.011
Growth in number of village programs	0.021**	0.010
Constant	0.052***	0.009
Chi2	533.95***	
Hansen-Sargan over identification test (chi2)	1542.27***	
Number of observations	5885	
Predicted growth in program participation with IBV (consumption growth)	0.23 (8%)	
Predicted growth in program participation without IBV	0.05	

²³ Growth in the proportion of households where all members have voted based on identity

V. Conclusions and lessons for policy

The REDS data show, that a significant number of households who are participants in welfare programs do not receive all of the benefits due to them. Therefore to be able to be selected into these programs, households may need to undertake strategies that will enable them to increase their participation in such programs and to increase their income and consumption. This paper has explored the strategy that involves voting based on identity (Jati) of the candidate.

Such voting has been increasing, and is now 44 percent in elections for Pradhan and 28 percent in elections for ward members. It is particularly large in Jatis whose population in the village is small. In nearly two thirds of the households all members voted based on identity, suggesting pooling of their influence.

In currently reserved Panchayats, problems in seeking benefits, of school quality and with water supply respectively are between 11 and 22 percent less for both men and women. For all five types of problems analyzed, for females in currently reserved Panchayats the problems reported are also significantly less than for men by between 12 and 34 percent. And finally for all five types of problems they are even much less if in the previous election the women voted based on their identity. Similar results obtain for problem resolution: Problem resolution for school quality, seeking benefits and beneficiary selection are better by between 12 and 22 percent in currently reserved Panchayats for men and women alike; for the last two problems they are even better for the women than for the men; and finally, for all five problems, women can improve problem resolution even further in Panchayats reserved for women if they vote based on identity.

We show that the benefits of female reservation and IBV persist even for the succeeding Panchayat periods. Therefore it is in the interest of households that voted based on identity in a previous period to repeat IBV and reap the benefits of such repetitions. This suggests that IBV will persist in the future. Among the determinants of IBV are the costs associated with leaving the social and information networks associated with Jati. Voters who participate more in GS meeting engage less in IBV, perhaps because they are more empowered and therefore have less of a need to improve their chances of program access via IBV.

Our results show that per capita consumption increases out of persistent IBV, with both the coefficients of changes in IBV between the last and the current Panchayat period, and between the second to the last and the last Panchayat period are statistically significant and positive at 2.5 percent and 4.7 percent of consumption respectively. Therefore persistent IBV is beneficial to households and at an increasing rate over time. Again this provides incentives for IBV to persist in the future.

The results also show that increases in government programs for agriculture, untied expenditures, and welfare programs have significant positive effect on growth in per capita consumption with elasticities of 0.3 to 0.4. Per capita consumption also increases with participation in GS meetings, perhaps because it improves information about the programs. But impact is small in magnitude. This suggests that program capture via attending GS meetings is not a powerful way for growth of own consumption.

The intention of policy makers was to improve the welfare of women via the reservation of the position of the Pradhan to them. It is clear that this is a modestly successful strategy. However, women, by voting based on their identity have been able to improve the impact of this policy very significantly, in terms of fewer problems encountered, more problems resolved, and in resulting higher consumption levels. It is therefore clear that, with respect to its intent, the policy itself, and the resulting voting behavior of women have reinforced each other and acted in a complementary way.

Clearly, in an imperfect political and administrative system, IBV is a second-best strategy for households to improve their welfare, as measured by problems resolved and household consumption. However, this may not be an improvement that benefits all households, as those households who do not engage in IBV may lose out in both program participation and consumption. A better way to improve welfare would be by improving targeting in the PRI system and improving its effectiveness in problem resolution via improved all around political participation, transparency and accountability.

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Table A1: Estimation of Change in Wealth

Variables	Coef.	S.E..
Change in wealth		
Age of household head in 1999	-0.007***	0.002
Change in mean of households' education	0.074	0.049
Change in variance of households' education	0.045**	0.023
Change in maximum of households' education	0.082	0.059
Number of male child in 1999 (<15 years)	0.033	0.047
Number of female child in 1999 (<15 years)	-0.114***	0.045
Number of male child in 2006 (<15 years)	0.062***	0.023
Number of female child in 2006 (<15 years)	0.033	0.023
Inherited wealth in 1999	-0.283***	0.008
Dummy for non-co-resident father of household head in 2006	0.410***	0.152
Dummy for non-co-resident brother of household head in 2006	0.349***	0.109
Dummy for non-co-resident sister of household head in 2006	-0.376**	0.194
Dummy for non-co-resident father of household head in 1999	-0.222	0.143
Dummy for non-co-resident brother of household head in 1999	-0.532***	0.100
Dummy for non-co-resident sister of household head in 1999	-0.303**	0.154
Constant	3.935***	0.119
Chi2	1564.27***	
Number of Observations	5885	

Table A2: Estimation of participation in Gram Sabha (GS) meetings

Variables	Coef.	Std. Err.
Participation in GS meetings		
Pradhan Jati is same as household Jati (Yes=1, No=0)	3.82***	1.53
Years of Education (household average)	1.28**	0.63
Household size	-0.56	1.04
Age (Head)	2.06	2.12
No. of household shocks	0.11***	0.04
Constant	13.22***	0.68
F-test	3.52***	
Number of observations	5885	