

Does Deliberative Participation Matter?

Political Economy of Provision of Local Public Health Goods in Rural India

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ABSTRACT

Access to basic water and sanitation services, the local public health goods, is a human right and a public health necessity. Provision of these services is typically devolved to Local Governments to ensure they correspond to the local needs. In rural India, such a correspondence is sub-optimal, with high local needs and poor provision by the Local Governments (Panchayats). The citizen participation in Panchayat's public deliberative meetings (Grama Sabha) is weak. The community context is characterised by social fragmentation and high socio-economic inequality. This research examined, whether and how better deliberative participation in Panchayat meetings was associated with better provision of these services by the Panchayats.

The research used a three-staged systematic sampling method. Using correlational field survey design it gathered primary data from 99 panchayats in Karnataka State, and from 99 villages and 396 individuals within these Panchayats. Factor analytic and multivariate regression techniques were used to analyse the data in the statistical software, Stata® v.13.

Results suggest, better Grama Sabha meetings (that were convened more frequently, attended by a higher number of people with better representativeness, where discussions approximate to the deliberative norms: reciprocal, pro-social and accountable; and decisions taken have a common good orientation) were associated with better provision of water and sanitation services by the Panchayat. Further analysis suggested two possible explanations for this association:

First, the individuals who participated more frequently in deliberative meetings of the Panchayat and where discussions approximated to the deliberative norms; were associated with:

- Better information on availability and accessibility to services,
- Better external political efficacy, a perception of greater responsiveness of the Panchayat to their needs and their efforts to influence it; and hence engage evenly in discussions
- Better sense of community, a greater willingness to cooperate and coordinate, to find mutual needs and seek convergence when they are heterogeneous

Above findings suggest, in a participatory setting, these individuals can be associated with better capability to collectively engage; to articulate, communicate and identify the most

common of their service needs and frame it as a collective demand, through policy objective, for provision by the Panchayats.

Second, better Grama Sabha meetings were associated with better rule of law in policy administration at the Panchayat level. This suggests, rule-bound conversion of policy objectives into actual service outputs; a reflection of responsiveness and accountability of the bureaucratic action in achieving administrative commitment to the legislative goals.

In conclusion, better deliberative participation can be associated with better capability of the individuals to engage in collective action. This can improve the correspondence between the needs and the provision; by strengthening individuals' collective demand for the services and by improving the responsiveness of the Panchayat in the supply of these services.

Keywords: local government, panchayat, deliberation, collective action, participation, grama sabha, local public health goods, water and sanitation services, information structure, political efficacy, sense of community, rule of law.

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OVERVIEW

This thesis aimed to empirically investigate the role of deliberative participation in improving access to basic water and sanitation services in the context of Panchayats, the rural Local Governments of India. The motivation came from the health, social and economic implications of poor access to these services. The purpose was to inform policies aimed at improving access to these services. The approach was deductive through empirically validating the theoretical assertions that local participation can improve correspondence of provision to local needs, and deliberation can improve capabilities of the individuals to act collectively.

This thesis is organised into four sections. The first section (Chapters 1-3) contextualises the topic, provides an analytical and a theoretical framework for its empirical investigation and sets out the hypotheses for testing. The second section (Chapters 4-5) explains the methodology used to gather data for the hypotheses testing and the measurement of the variables. The third section (Chapters 6-10) describes and discusses the results of the hypotheses testing. Fourth and final section (Chapter 11), concludes with a discussion on policy and theoretical implication of the results, its limitations and directions for further research.

In all the chapters statistical tables and figures, when present, are provided at the end of the chapter. The remaining part of this section provides a brief overview of each of the chapters.

The First Chapter examines the design and functions of the electoral, financial and participatory institutions of the Panchayat and reviews empirical evidence on their performance in relation to the provision of water and sanitation services. The Panchayats are constitutionally empowered and institutionally protected Local Governments, with a devolved responsibility to provide local public goods; in engagement with the local citizens and in correspondence to their common preferences. The electoral and financial institutions give Panchayats the necessary autonomy and self-reliance in functioning. The deliberative participatory institution, the Grama Sabha, gives an opportunity for local

citizens to engage with the Panchayat: to ensure provision correspond to their common feasible needs and to build their capability for local governance. Review of empirical evidence suggests: The elections are held fairly regularly; there seems to be sufficient of funds with the Panchayat for provision of basic public local public goods; the performance of Gram Sabha is sub-optimal, characterised by weak and non-representative local participation; provision of water and sanitation services is inadequate and inequitable; correspondence between citizens' preference for these services and provision of them by the Panchayats is low; and the societal context is characterised by social fragmentation, high socio-economic inequalities and routine marginalization of certain disadvantaged sections of the community. The chapter concludes, by asking; whether and how better participation in deliberative meetings of the Panchayat is associated with better provision of water and sanitation services by the Panchayats.

The Second Chapter sketches an analytical framework explaining achieving correspondence between preference and provision requires sustained collective action involving the citizens, the elected members and the bureaucrats, to identify the common preference and to convert it into public good outputs. The Participatory institutions can improve collective action, by facilitating individuals to articulate, communicate and collectivise their preference as a collective demand, through policy objective, for provision; and then facilitating the exercise of oversight over the rule-bound conversion of policy objectives into public health goods. However, at the individual level, ability to articulate depends on their level of information on the availability and the rules to access to local public health goods; the ability to communicate depends on their political efficacy, a perception of greater responsiveness of the Panchayat to their needs and their efforts to influence it; and the ability to collectivise depends on their sense of community, a greater willingness to cooperate and coordinate, to find mutual needs and seek convergence when they are heterogeneous. At the Panchayat level, the extent of conversion of policy objectives into public good outputs depends on the capability of the politicians and bureaucrats to credibly commit to the rules of the law.

The Third Chapter postulates that deliberative participatory institutions can provide the mechanism to achieve and sustain collective action; by their ability to, improve information as common knowledge, build political competence, enhance integration and inculcate public spiritedness among its participants. The deliberative theorists explain this as, public deliberation is guided by basic liberty, basic opportunity and fair opportunity; and is regulated by principles of reciprocity, publicity and democratic accountability and is conducted within a framework of antecedent and procedural rules. However, difficulty in achieving ideal deliberation setting, the possible polarizing effect in the presence of heterogeneity and optimality of deliberation can impede deliberation. Informed by these, the chapter concludes by proposing, better deliberative participation in Panchayat's meeting is associated with better provision of water and sanitation services by the Panchayats. As a possible explanation, it further proposes, deliberative participation is associated, at the individual level with better levels of information, political efficacy and sense of community; and at the Panchayat level with better rule of law.

The Fourth Chapter outlines the methodology used to gather data to test the propositions; and the approach to the statistical analysis of the data. Employing a correlational survey design, three staged systematic sampling method was used to select 99 Panchayats. Within these Panchayats, 396 key individuals and 99 villages were sampled. Structured questionnaires were developed to gather data, and the statistical software Stata® v.13 was used to analyse the data. Using complete case approach, factor analysis was used to measure composite variables, and multivariate regression analysis to test the propositions.

The Fifth Chapter describes the measurement of independent variables used in different regression models and provides their descriptive statistics. The measurements of the dependent variables are explained in the chapters dedicated to describing and discussing the results of testing of each of the propositions.

This Sixth Chapter empirically shows individuals who participate more in deliberative meetings are associated with better levels of information, and hence are better capable of articulating their preferences for local public health goods. For individuals to articulate

their preference they need adequate information on rules for collectivising the preferences; procedures to access, withdraw and manage the water and sanitation services; and the preferences of other participants. Incomplete information can make individual preferences heterogeneous and collectivisation of it difficult. Deliberative meetings can be associated with enhanced availability and accessibility of the information, through their requirement to give in public; factual information in a clear manner on a preference and the reasons to propose it / justify it / reject it.

The Seventh Chapter empirically shows individuals who participate more in deliberative meetings are associated with better levels of external political efficacy, and hence are better capable of communicating their articulated preferences. For individuals to communicate their preference, they need to perceive that their voice matters (is heard) in arriving at the collective preference in a participatory setting having individuals from differing socio-economic statuses; and this perception is operationalised as political efficacy. Deliberative participation through its requirement of, equality of opportunities: to participate, to propose preferences and to deliberate on others' preferences in a non-dominant manner; all major preferences in the community to be communicated and considered; strength of the reason as the criteria for considering the preference rather than who made it or how many; respect for opposing views; and equal rights in collective decision; can be associated with higher individual perception that their voice does matter.

The Eighth Chapter empirically shows individuals who participate more in deliberative meetings are associated with better levels of sense of community, and hence are better capable of collectivising the communicated preferences. In the context of heterogeneity in the community because of different bases, affinities and values; and where individuals prefer to free ride on other's efforts, sustaining collective action can be difficult. Evidence suggests, such a context requires individuals to have cooperative goals and coordinated their strategies to find mutuality in each other's needs through a willingness to understand each other's concerns and values. Such a convergence is operationalised as the sense of community. Deliberative participation through its principle of reciprocity encourages individuals to actively seek convergence in a cooperative manner by offering and finding,

solutions and justifications, which are mutually accessible and acceptable. Such an exchange improves tractability of the collective action by promoting adaptive behaviour, the predictability of the interactions and by providing a common base for arriving at the preference.

The Ninth Chapter empirically shows that better participation in Grama Sabha meetings is associated with better rule of law in operations of the Panchayat related to policy administration. This administrative compliance to legislative goals is achieved through rulemaking, rule application and rule adjudication. The elected members as principals have authority over bureaucrats as agents. Principals through a legally enforceable contract delegate their authority to the agents, to administer their policies through rule application and rule adjudication in an accountable manner. However, such rule-based governance, rule of law, is characterised by inherent asymmetries between principals and agents which can lead to dilemmas in the exercise of discretion in delegated powers and expectation of accountability for it. The deliberative participation by improving knowledge of the rules; making clear who is accountable to whom for what, when and how; by socially sanctioning selfish material motives and by making talk costly by linking it to the outcomes enhances the credibility of commitment to these rules by the agents from both a motivational and an imperative sense.

The Tenth Chapter empirically shows that better participation Grama Sabha is associated with better provision of water and sanitation services. It starts by briefly reviewing present arrangements for the provision of these services. It then examines the present state of provision and the possible reasons contributing to it. Then it discusses the results in relation to findings by other studies.

The Chapter Eleven starts by briefly summarising the key findings of this research. Then it relates these findings from a policy perspective to the important issues in the performance of the Panchayat raised in Chapter One. After this, it discusses how the findings of this research feed to the analytical and theoretical arguments made in Chapters Two and

Three. Finally, it concludes by outlining some of the limitations of this research and suggesting directions for further research.

CHAPTER 1: SETTING THE SCENE: PANCHAYATS, DELIBERATIVE PARTICIPATION AND BASIC WATER AND SANITATION SERVICES

Adequate provision of local public health goods such as basic water and sanitation services is both a social imperative and a public health necessity. United Nations recognises “right to water as indispensable for leading a life in human dignity”; and “access to water and sanitation as a basic human right, and necessary for the realisation of (other) human rights” (United Nations 2010). These services are collectively desired but beyond individual means.

There is wide consensus that the functions of a Government find rationale and legitimacy in the provision of such local public goods (Colomer 2011: ix). However, in the provision of these goods, the debate on how the Government should be organised and who should govern it, is perhaps as old as the study of politics itself (Treisman 2007:6). If the early nineteenth century saw a distinct trend towards democracy as the preferred form of governance among nations (Huntington 1991); the latter half of the twentieth century saw a “quiet revolution” among the democratic polities to decentralise local public good functions to Local Governments (Campbell 2003; Cheema and Rondinelli 2007:8).

One of the motivations for the transition to local governance was to improve access to local public services by engaging local citizens in local governance of these services, through deepening democracy¹ (Chaudhuri 2006; Manor 1999). In such a setup, the citizen engagement with the local governance is expected to share a symbiotic relationship, as each makes the goal of the other more possible (World Bank 2015). The Local Governments can create opportunities for participation whereas, the participation, in turn, can help to improve the correspondence between citizens’ need for public goods and provision of it by the Local Governments (ibid).

India also has been experimenting with Panchayats, its ancient rural local Governments; to improve access to local public goods. In 1993, the Central Government, through a

¹ For other reasons see Rondinelli, Cheema and John 1983; Cheema et al 2007

constitutional amendment, devolved the responsibility for local public good functions including provision of basic water and sanitation services to the Panchayats. To enable Panchayats to perform this responsibility it empowered them with, electoral and financial institutions such that they have the necessary autonomy and self-reliance in their functioning. To engage the local citizens in local governance it created deliberative participatory institutions. However, two decades after this exercise, access to basic water and sanitation services by the rural citizens remains less than adequate and local participation in deliberative institutions is weak and uneven.

This chapter examines the design and performance of the above institutions of the Panchayats in so far as the provision of local public health goods and is structured as follows.

The first section briefly traces the historical evolution of the Panchayats. The second section examines the design and functions of its institutions. The third section reviews key empirical studies on the performance of these institutions and on the state of provision of local public health goods by the Panchayats. The fourth section concludes by identifying the possible gaps in the knowledge and the rationale to bridge this gap.

1.1 EVOLUTION OF PANCHAYATS AS LOCAL GOVERNMENTS

The Panchayat² has seen four distinct phases in its evolution to the present day form. During the pre-colonial period, it functioned as an informal senate comprising of village elders and local elites and dealt with local issues through public deliberation involving village adults (Alok 2011:2; Tinker 1968:20). During the colonial rule, it was accorded a formal institutional status. It was governed by a body of elected members with a purpose to promote “administrative efficiency”, “political education” and “human development” at the local level (DeSouza 2005:371; Tinker 1968: 43-62). However, designed as a hierarchical administrative institution with very little political role, its function was restricted to the collection of local revenues rather than local governance (ibid).

² Literally Panchayat means assembly (Ayat) of five (Panch) people

After independence, the Indian Constitution, within the framework of federated parliamentary democracy, preferred centralised bureaucracy over Panchayats, for delivery of local public goods; perhaps to overcome widespread provincialism and communalism prevalent at that time (Oommen 2005:236; DeSouza 2005: 372-74). The constitution listed local governance under State functions and specified in Article 40(C) “the State should take steps to organise village Panchayats and endow them with such power and authority as may be necessary to enable them to function as units of self-government” (Mathew 1994:5-6).

In the ensuing decades, the performance of centrally designed and administered programmes, in improving access to basic local public goods and in eliciting local participation in them was suboptimal. This prompted the Central Government to appoint successive committees to examine reasons and recommend solutions (BMCR 1957; AMCR 1978).

These committees recommended decentralisation of programme administration to democratically represented Panchayats, empowered with necessary power and resources to execute these functions (ibid). Following these recommendations, the Central Government prompted the State Governments to pass legislation for the creation of the Panchayats (Mathew 1994).

Though the institutional design of these Panchayats varied across the States, integral to their functioning was the Grama Sabhas, a deliberative assembly of village adults. These Grama Sabhas were varyingly endowed with the responsibility to review accounts and programmes of the previous year, and plan and budget for programmes for the current year; through public deliberations involving local citizens, elected members of the Panchayat and its officials (Maddick 1970: 72-79; Mathew 1994).

In the initial phase, regular elections to Panchayat’s political offices saw the emergence of a new cadre of young leaders, many from disadvantaged sections. Also, implementation of developmental programmes through the Panchayats increased Panchayat’s relevance to local citizens. This inclusiveness and relevance, elicited popular support for Panchayats, as

people believed they had the power to mould their future through Panchayats (Mathew 1994:10-13).

However, the politicians and the bureaucrats at the higher level perceived these raising local powers as a threat to their entrenched positions. Hence they scuttled the functioning of Panchayats by delaying its elections, by by-passing it in developmental programs, by decreasing/delaying transferring of funds to it, and by convening Grama Sabhas irregularly and infrequently without prior notice; as all these were within their discretion (DCR 1963; Jain 1997; DeSouza 2005:377-79; Crook and Manor 1998:52-80). There was also a perceived lack of capability at the local level to govern, and lack of information about processes of Panchayats and purposes of Grama Sabha among people (DeSouza 2000; Rao 1989). Because of these factors, after the initial promise of hope and success, Panchayats began to gradually lose their relevance in the overall strategy for rural development (see Mathew 1994:50-67).

Perhaps, glimpses of effectiveness of Panchayats if managed well, and the multiple failures of the centralised bureaucratic apparatus to improve access to local public goods (Chaudhuri 2006) led to the appointment of two committees by the Central Government: GVK Rao Committee to review administrative arrangements for rural development in 1985, and the LM Singhvi committee to prepare a concept paper on Panchayat's role in rural development in 1986 (GVKRC 1985; LMSCR 1986). Acting on the recommendations of these committees, the Central Government passed the seventy-third amendment to the constitution in December 1992 and enacted it in April 1993 (Henceforth 1992 Act); which gave Panchayats a constitutional status with economic, political and social responsibility for rural development (CAA 1992).

The preamble to this Constitutional Amendment Act of 1992 (henceforth 1992 Act) observed "Panchayats have not been able to acquire the status and dignity of viable and responsive people's bodies due to a number of reasons including absence of regular elections, prolonged supersessions, insufficient representation of weaker sections like Scheduled Castes, Scheduled Tribes and women, inadequate devolution of powers and lack

of financial resources” (CAA 1992). Towards addressing these constraints, the 1992 Act directed the State Governments to legislate:

1. The formation of three tiers of Local Governments at the district (District Panchayats), block (Block Panchayats) and village (Gram Panchayats) levels; which are together called as Panchayat Raj Institutions (PRI)
2. The scope of the public good functions of the PRIs
3. The creation of electoral and fiscal institutions to ensure PRIs have the necessary autonomy and self-reliance in performance of these functions, and
4. The creation of deliberative participatory institution, the Grama Sabha, to engage local citizens in local governance of these functions

The final design of the institutions of PRIs in terms of degree of political, financial and administrative devolution was left to the States (Mathew 1994; see World Bank 2001 for an overview).

The scope of the 1992 Act to deepen democracy and to bring Government nearer to the people can be gauged by the following statistics. Before the Act, there was a single national parliament, 25 State legislative assemblies and one elected representative for approximately 200,000 citizens. After the Act, there were about 238,680 constitutionally recognised assemblies with 500 at the district level, 5,900 at the block level and 232,200 at the village level and one elected representative for every few hundred citizens (Chaudhuri 2006). This, some argue, together constitute the largest governmental system in the world (Rao 2007:137).

Among the three tiers of PRIs, the Gram Panchayats are largely responsible for local public health good functions. The next section describes these functions of the Gram Panchayat; and then examines the role of its electoral, fiscal and participatory institutions in performance of these function, as provided for by the 1992 Act and contextualised to Karnataka State (see Section 1.1 for the rationale for choosing Karnataka State).

1.2 THE GRAM PANCHAYATS: FUNCTIONS, FUNCTIONARIES AND FUNDS

Karnataka has 30 District Panchayats, 176 Block Panchayats and 5,655 Gram Panchayats (RDPR 2014a:14). Typically a Gram Panchayat (henceforth Panchayat) has jurisdiction over a population of ~6,000 spread over ~5 villages and ~15 electoral wards (See Figure 1.1 for a schematic representation). Each ward is represented by a ward member, also referred to as a Panch, who is directly elected by the electorates of the village. The next few sections describe the public good functions of the Panchayats; the elected and appointed officials of the panchayats responsible for carrying out these functions and source of funds for these functions.

1.2.1. Provision of Local Public Goods: The Functions

The 1992 Act directed the State legislatures to devolve appropriate power and authority as may be necessary for the Panchayats to function as institutions of Local Government in planning and implementing programs for economic development and social justice (Article 243G). Schedule 11 of the Act listed 29 broad categories of local public good functions which may be devolved to Panchayats.

In Karnataka State, the Panchayats have the responsibility for providing overall civic administration to the area under their jurisdiction. Their local public good functions include provision of local public health goods, village roads, culverts and street lights; selection of beneficiaries for Central / State Government sponsored social benefits; activities aimed at promoting health, safety and social well-being of the citizens; and cooperating with other governmental departments in implementing various rural development programmes (Section 58 of 1993 Act).

In the context of this research, local public health goods are basic water and sanitation services provided by the Panchayats in the villages under their jurisdiction. These services include the supply of water for drinking and household purposes; provision of household

toilets; construction and maintenance of sewers and community toilets; management of garbage and maintenance of overall sanitation in the villages³.

Specific responsibilities of the Panchayat related to water and sanitation services include: construction, repair, maintenance and protection of drinking water facilities, prevention of water pollution; provision of sanitary latrines to not less than 10% of households every year until full coverage is achieved; construction and maintenance of adequate number of community latrines; and maintenance of overall sanitation in the villages (Section 58 of the 1993 Act). In performing these functions the Panchayats are expected to follow three key processes in engagement with the local citizens.

First, the program planning process, which requires panchayats to identify, budget and prepare plan of action for provision of, commonly needed local public goods in consultation with local citizens through convening Grama Sabhas; and then submit it to Samanya Sabha for its approval (Sections 3, 3A and 58 of the 1993 Act).

Second, the program implementation process, which requires Panchayats to provide these goods in an inclusive and socially just manner in accordance with the rules specified in the 1993 Act (Section 61 of the 1993 Act).

Third, the program review process requires, which Panchayats to review the provision of these goods through preparation of an annual income and expenditure report and by holding public social audits; and then submit these reports to Grama Sabha for its consideration and then to Samanya Sabha for approval (Section 241 of the 1993 Act; see also Section 9.3).

1.2.2 The Electoral Institutions: The Functionaries

The 1992 Act mandated holding of elections once in five years at the ward level to the political offices of the Panchayat. To provide a representative social base it reserved one-third of political offices for women and also provided reservation for Scheduled Caste and Scheduled Tribe, the disadvantaged and marginalised sections of the community, in

³ In this thesis local public health goods and water and sanitation service are used synonymously.

proportion to their population (Articles 243C, 243D, 243E). It then directed the creation of an Election Commission in all the States to provide regulation and to exercise oversight, in electoral matters (Article 243K).

In Karnataka State, elected members of the Panchayat constitute its executive council, the Samanya Sabha, and it is headed by the President, leader of the elected members (Sections 7 to 45 of 1993 Act). The Samanya Sabha is overall responsible for providing civic administration and performance of the public good functions of Panchayat. While executing its responsibilities the Samanya Sabha is expected to consider the recommendations of the Grama Sabha in related matters.

To implement the decisions taken by the Samanya Sabha, at the operational level, Panchayat has 'staff' (bureaucrats) who are appointed by the State Governments and 'workers' who are appointed by the executive council (Sections 111, 112 and 113 of the 1993 Act). The Panchayat staffs typically include Panchayat Development Officer (PDO), the secretary and the accounts assistant. The Panchayat workers include field level staff and office assistants.

1.2.3 The Fiscal Institutions: The Funds

The 1992 Act authorised the Panchayats to levy, collect and appropriate taxes for the public services they provide. It also directed the State Government to assign to Panchayats such taxes collected on their behalf in the form of statutory grant-in-aid (Article 243I). It then directed the Governors of the States to constitute a Finance Commission every five years to review the financial position of the Panchayats and make recommendations to the State Government (Article 243J).

In Karnataka State, Panchayats have three major sources of revenue (for details see Rao 2004, 2007; Oomen 2005; World Bank 2004; Vyasulu 2007):

1. The grant-in-aid from the consolidated fund of the State Government. This is decided by a formula based on population, geographical area, and extent of social and

economic backwardness of the region; and is subject to a minimum of Rs 500,000 (~ £5,000) (Section 205 of 1993 Act).

2. The developmental grants from the Central and the State Governments.
3. The own revenue raised through taxes for the public services it provides (Sections 199, 200 and 204 of the 1993 Act).

1.2.4 The Deliberative Participatory Institutions: The 'Bedrock' of Local Democracy

The 1992 Act provided for public deliberative institutions to engage local citizens in local governance (Article 243A). It directed the creation of Grama Sabha in every Gram Panchayat and that it should be convened at least bi-annually. The Grama Sabha is a body composite having as its members, the persons registered in the electoral rolls of the villages within the jurisdiction of the Panchayat. The Act empowered Grama Sabhas to exercise such powers and functions as assigned by the legislatures of the States. Creation of the Grama Sabhas has been argued by some as the largest deliberative experiment in the history of human kind (Rao and Sanyal 2010). The Central Government underscored the importance of the Grama Sabhas by declaring the year 1999-2000 as the year of the Grama Sabha (DeSouza 2005:390).

In Karnataka State, the 1993 Act requires that the Grama Sabha meeting should be convened by the panchayat in a public space, at least bi-annually and it shall be chaired by the President. The local citizens; Panchayat's elected members, staff and workers; and representative officials from other Government Departments in the Panchayat jurisdiction are expected to participate in the meeting.

The quorum requirement needs attendance of at least ten percent of the members or hundred members whichever is less. To enhance inclusiveness and representativeness in local engagement in local governance it is desired to have, at least ten attendees from each ward, at least thirty percent of total attendees as women, and proportional attendance from Scheduled Castes and Scheduled Tribes.

Some of the key functions of the Grama Sabha are:

1. Identify the common local public good needs, generate proposals for their provision, and prioritise them based on commonality of the needs and the availability of the resources.
2. Selection of beneficiaries for social benefit programmes.
3. To get information on Panchayat's programmes, Panchayat's plan of action for the next six months, the rationale for the decision taken by the officials of the Panchayat, and on follow-up action on recommendations made in the previous Grama Sabha meeting.
4. To decide the location of access points for public services such as street lights or public water taps.
5. Assist Panchayat in implementation of its programmes and promote collection of tax for the public services provided by the Panchayat
6. Provide information to the participants on cleanliness, preservation of the environment, and prevention of pollution.
7. To assist Panchayat in sanitation arrangements, garbage management and protection of common goods.
8. Promote communal harmony and unity among different groups and take action against discrimination based on gender, caste or religion.
9. Discuss Panchayat budget, action plan and allocation of funds along with the detailed estimates; and
10. Review and make recommendations to the financial and social audit reports of the Panchayat.

In addition, through activating democratic processes at the grassroots level, Grama Sabhas are expected to inculcate community spirit, increase political awareness, strengthen developmental orientations, educate in administrative and political processes, and enable the disadvantaged sections to progressively assert their point of view (AMCR 1978).

Prior to holding Grama Sabha, a similar meeting at the level of the wards, the Ward Sabha shall be convened (Section 3 of the 1993 Act), and Grama Sabha shall consider suggestions from the Ward Sabhas in its deliberations. A separate Grama Sabha, MGNREGA Grama Sabha, shall be held every year in addition to regular Grama Sabha, to plan and review the

activities under Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGA).

Apart from Grama Sabha, the Samanya Sabha is the other key deliberative institution of the Panchayat (Sections 3A, 52-57 of 1993 Act). In addition, Panchayat has standing committees to assist it in its functioning.

The Samanya Sabha meeting should be convened at least once a month under the chairmanship of the President. A notice having the meeting date and the agenda topics shall be sent to members at least seven days before the meeting. The quorum requirement needs attendance of at least half of its members.

Detailed minutes of the Grama Sabha and Samanya Sabha meetings should be maintained and a copy of the minutes should be displayed in the Panchayat public notice board within three days of the date of the meeting.

The 1993 Act mandated the creation of three standing committees to assist Panchayat in its functioning (Section 61). The Production Committee looks into economic activities; the Amenities Committee looks into health, education and other basic civic amenities; and Social Justice Committee looks into justness in the performance of its functions by the Panchayat. These committees are made up of three to five elected members, local citizens and representatives of the local civic associations.

1.2.5 Socio-Cultural Context of the Panchayats

A better appreciation of some of the directives of the 1992 Act, for instance, reservation of political offices; requires an understanding of the social context in which the Panchayats operate.

Caste determined hereditarily and class determined by (non)ownership of the means of production, stratifies society (Beteille 2012). Distribution of power and scope for social mobility, within and across them, determines how hierarchical or egalitarian the society is (Weiner 2001).

In the Indian society, over a period of time, diverse social institutions related to caste and class, have engendered their own sub-categories in the form of associations and groups. These have perpetuated their distinct identities through endogamy and by discouraging social mobility across them (ibid, see also Bailey 1963; Hoff 2011). Asymmetric distribution of social, economic and educational resources among these groups due to historic and cultural factors has rendered society stratified, hierarchical and weakly cohesive (Jayal 2001, ibid). This has resulted in higher castes, landed and political elites, occupying the upper rungs with Scheduled Caste, Scheduled Tribes, women, landless and illiterate being relegated to the lower rungs of the social hierarchy (Beteille 2012, Deshpande 2000, ibid).

Those in upper rungs through direct barriers such as enforced and routinized forms of social exclusions and indirect barriers such as clientelistic relations have alienated those in lower rungs from participating in many day-to-day social, economic and political situations (Heller, Harilal and Chaudhuri 2007, Jayal 2001), in pursuance of their own self-seeking interests. This alienation, as a capability deprivation⁴, has constrained the capacity of those in lower rungs to interact freely in social relations and engage evenly in participatory situations due to lack of confidence, low esteem and weak voice (ibid, Sen 2000).

Also, in the Indian society the agency of women in social, economic and political situations has been traditionally suppressed (Sen and Dreze 2002; Chhibber 2002). The men act as gatekeepers to their autonomy and independence, in preserving the norms of a patriarchal society (Jejeebhoy 2002). This deprivation has resulted in women being less healthy, less educated, less informed, less resourceful, less valued, less influential and less equal, in their own households and in the society as whole (ibid). In the 2014 UN Gender Inequality Index, India with a rank of 127 out of 146, is placed below many of the Sub-Saharan countries (UNDP-GII 2015).

The 1992 Act by reserving political offices to Scheduled Caste, Scheduled Tribe and women, and by mandating public deliberations in Grama Sabhas and Samanya Sabhas, has

⁴ Deprivation is lack of capability to live a minimally decent life (Sen 2000). According to Adam Smith (1776) non-deprivation is 'ability to appear in public without shame' (cited in Sen 2000)

offered a structural opportunity to equalise voice and agency across the social strata, and alter 'terms of recognition' in the social-political-economic context (Rao and Sanyal 2010). However, political co-optation and political mobilization of Schedules Caste and Scheduled Tribe has transformed caste from a unit of social action to a unit of political action (see Weiner 2001). Whether this helps to make the society more egalitarian and cohesive, or further deepens the existing fissures remains a moot point.

1.3 FROM PROMISE OF HOPE TO PERFORMANCE: REVIEW OF EMPIRICAL LITERATURE

It has been two decades since the landmark 73rd constitutional amendment has been enacted. It will be useful to assess from a policy perspective, to what extent the constitutional status and the institutional empowerment have enabled the Panchayats to overcome the constraints mentioned in the preamble to the 1992 Act, in the performance of their public good functions.

Research approached this from three key objectives. First, have the electoral and fiscal institutions provided Panchayats the necessary autonomy and self-reliance in its functioning. Second, have the deliberative institutions served to effectively engage local citizens in local governance, such that provision of public goods corresponds to their needs. Third, the adequacy of provision of local public health goods by the Panchayat.

In assessing this, a literature search was conducted with the following keywords: India, local, government, Panchayat, grama, gram, sabha, saba, deliberation, collective, action, participation, drinking, domestic, household, water, sanitation, toilet, services, public, health and hygiene. Then a set of string combinations of these words were developed such as: "local government", "gram panchayat", " gram sabha", "water and sanitation services", "deliberative participation" etc.

Then the search was conducted in two phases. In the first phase, websites of the following institutions/ministries and their allied sites were searched using the string combinations: Ministry of Drinking Water and Sanitation, Department of Rural Development and Panchayat Raj, Planning Commission of India, World Health Organisation, World Bank,

Organisation for Economic Cooperation and Development (OECD), Water Aid, Oxfam, Census India and Asian Development Bank (ADB).

Then in the second phase, published literature having these string combinations either in their title or in their abstract was searched using general search engines such as google scholar and Oxford University library search; and using specialised search engines of databases such as Scopus and PubMed. The search was limited to the articles published in English since the year 2000 as this gives panchayats at least one complete electoral term. All the articles collected were imported into the reference manager software Mendeley®. Duplicate articles were deleted. Then a quick review of the abstract of the articles was done. Those which did not match the study objectives were dropped. In addition, reference based and 'similar articles' based search using the retained articles were done.

1.3.1 The Performance of Electoral and Fiscal Institutions

The elections to the Panchayats are being held regularly as per the directives of the 1992 Act, with the exception of initial delays in certain states like Bihar (Planning Commission 2006: 22). Studies show that reservation of political offices to persons belonging to Scheduled Caste and Scheduled Tribe gave them not only better bargaining and decision making power (Chattopadhyay, Duflo and Fischer 2006) but also increased targeting of public goods to these communities resulting in more equitable allocation (ibid; Bardhan and Mookherjee 2010, 2004; Besley, Pande and Rao 2005). These suggest that the identity of the policy maker can influence policy, and Panchayats can have effective control over their policy decisions. However, this may also suggest clientelistic tendencies among the policy makers.

Studies on the reservation of political offices for women are rather inconclusive. Some report it was associated with better provision of public health goods (Chattopadhyay and Duflo 2004; Beaman, Chattopadhyay and Duflo 2008) while some other report it did not have such an effect (Raabe, Madhushree and Birner 2009; Ban, Gupta, Das and Rao 2008) or even worsened the pro-poor targeting (Bardhan *et al* 2010).

The percentage of State public expenditure devolved to three tiers of PRIs to carry out the public good functions varies widely among States. For instance, in Kerala State, it is about 35-40% of its plan expenditure (Heller *et al* 2007) whereas in neighbouring Karnataka State it is about 21% of total State outlay (Natraj, Premlatha and Gowda 2014:40). These funds are electronically transferred to Panchayats' bank accounts, to overcome uncertainties and bureaucratic delays (Aziz 2007; RDPR 2014a).

In raising their own revenues, Panchayats are constrained by limited capacity to administer a revenue system, limited revenue base, and lack of political will and bureaucratic incentives to enforce tax collection (World Bank 2004). For instance, in Karnataka, in 2008-09, the Panchayats raised on an average Rs 71 (~£0.75) per person which contributed to about 8.8% of their total revenue (Natraj *et al* 2014).

Ever since the implementation of MGNREGA Programme and recommendations of National Finance Commission, it appears that the Panchayats are getting adequate funds and in time, to carry out their basic public good functions (see Aziz 2007; Ban *et al* 2008). In Karnataka, in 2008-09, the average per capita availability of funds with the Panchayats was Rs 804 (~£8.00) and average per capita expenditure was Rs 580 (~£ 6.00) (Natraj *et al* 2014).

1.3.2 The Performance of Deliberative Institutions: The Grama Sabhas

This section discusses the performance of Grama Sabha along four key themes.

1.3.2.1 Regularity of the meetings, and inclusiveness and representativeness of its participants

The task force appointed by the Central Government in 2001 to review functioning of Panchayats observed, though all the States have constituted Grama Sabhas, in many of the States functions are assigned to them without necessary powers to perform them, thereby reducing Grama Sabha meetings to a mere ritualistic exercise (Planning Commission 2001:13).

Similarly, working group on decentralised planning appointed by the Planning Commission (2006:28) reported that functioning of Grama Sabha was uneven; with it being vibrant and active in some instances, and irregular and thinly attended in some others. Some of the reasons cited by the report for the thin attendance were meeting agenda not circulated in advance, nominal nature of certain functions such as social auditing, and non-attendance by officials and elected members.

Alsop, Krishna and Sjobolm (2001) in their study of Panchayat in the States of Madhya Pradesh and Rajasthan report that, though 95% of their respondents voted in Panchayat elections, only 35% of them had attended a Grama Sabha meeting. They report women, illiterate, Scheduled Tribes, those who are politically less active, those staying away from Panchayat headquarters, those who have less contact with their local elected member and those who have less access to different sources of information were less likely to attend. They found participation was not influenced by the gender or the caste of the Panchayat President. They reasoned that participation was low as only those who have material incentives such as eligibility to social benefits participate (see Ghatak and Ghatak 2002).

Besley *et al* (2005)⁵ in their study of Panchayats in southern States found that 25% of Panchayats never held a Grama Sabha meeting in the previous year. Though 50% of households had heard about Grama Sabha, only 20% of households ever attended one. Illiterate and women were less likely to attend while Scheduled Caste and Scheduled Tribe were more likely to attend. They found attendance by illiterates, landless, Scheduled Caste and Scheduled Tribe increased with the literacy rate of the Panchayat, which they attributed to positive externality of the literacy. They also found awareness about purpose and functions of Grama Sabha were generally low among the villagers.

Heller *et al* (2007) in their assessment of Panchayats in Kerala found only 7.8% of electorates participated in Grama Sabha. They report women, Scheduled Caste and Scheduled Tribes participated in higher proportion to their population.

⁵ See also Besley, Rao and Pande (2012), Besley and Burgess (2002)

Chhibber (2002) reports participation of women in Panchayat's processes is low possibly due to low information among women about reservation of political offices for them (only 56% knew about this), their socio-economic status and prevalent socio-cultural bias about the role women can play outside the private sphere of the household.

Ghatak *et al* (2002) in their study of Panchayats in West Bengal report that participation in Grama Sabha meeting was low among women, higher castes, landed and wealthy. Among attendees, largely are those who had allegiance to the ruling party.

Bryld (2001) in his study of Panchayats in Karnataka found that women participate less than men, both in number and in deliberations; and level of education did not seem to influence this. He also reports, those belonging to Scheduled Caste or Scheduled Tribe did not perceive any sense of exclusion from participating either in the Grama Sabha or in the elections of the Panchayat.

1.3.2.2 Nature of the participatory process

Heller *et al* (2007) report 66% of their respondents felt topics discussed reflected local needs, and participation does provide information about Panchayats processes. However, Ban, Jha and Rao (2012) and Chhibber (2002) report a lack of information among participants. Ghatak *et al* (2002) report participants deliberated on issues such as the need for newer programmes, implementation of ongoing projects in terms of quality of work and utilization of funds, and selection of beneficiaries. However, they found women, Scheduled Caste and Scheduled tribe to be having a weak voice and low agency in the meetings.

Ban *et al* (2012, see also Rao and Sanyal 2010) in their manuscript analyses of the deliberations in Gram Sabhas in southern States found that the probability of an individual's highest priority being discussed increased with the income and educational levels of the individual, and Gram Sabah's collective preference approached that of the pivotal agent. In ethnically homogeneous settings, as against in heterogeneous settings, these effects are lower and there was greater consensus on the common public good

needs. They observe, the kind of topics raised and the time devoted to it reflected prioritization of issues. They conclude that Grama Sabhas are not just talk-shops, and provide valuable information on preferences and assigns roles to credible agents.

However, overall thin attendance, poor representation and uneven participation in deliberations, raises concerns about legitimacy and commonality of the needs identified, as not all preferences are revealed.

1.3.2.3 Building capacity of local citizens for local governance

Widmalm (2005) in his study of Panchayats in Kerala and Madhya Pradesh found that Panchayats have overall improved the sense of empowerment and perception of political influence among the local people. Isaac (2005) using data from different surveys in Kerala State reports, participatory processes of Panchayat have empowered women representatives in terms of knowledge of rules, regulations and processes; public speaking, managing bureaucrats, public interaction, conducting meetings and planning Panchayat activities. However, as Kerala State has the highest Human Development Indicators (HDI) among the Indian States (Suryanaraya, Agarwal and Prabhu 2011), reasons could be factors external to the participatory processes also.

1.3.2.4 Exercise of oversight on functioning of Panchayat

Besley *et al* (2005) observe Grama Sabha has the potential to play an important role in improving the quality of governance and transparency in Panchayats. Both Ghatak *et al* (2002) and Heller *et al* (2007) note that Grama Sabha meetings have increased the accountability in Panchayat's functioning and responsiveness of the elected members to local needs. However, Alsop *et al* (2001) observe thin attendance constrains Grama Sabha from functioning as an effective mechanism of oversight.

Though many studies report that Panchayats have overall improved pro-poor targeting of public goods (see Bardhan *et al* 2004; Besley *et al* 2005; Heller *et al* 2007), most of the these studies also report some form of clientelistic and rent-seeking tendencies on the part of the Panchayat officials in general and by the Panchayat President in specific; both in

allocation of public goods and in selection of beneficiaries for social benefits (see for instance Aslop *et al* 2001; Besley *et al* 2005; Bardhan and Mookherjee 2004; Ghatak *et al* 2002; Vijayalakshmi 2008).

1.3.3 State of Provision of Basic Water and Sanitation Services: Adequacy and its Implications

World Bank (2008b) in its extensive review of more than 600 rural water supply schemes, including those in Karnataka State, found though Government of India on an average spent about a billion US dollars annually between years 1993 to 2008 for providing drinking water to rural areas and improvement in access to water, however, did not commensurate with the amount spent.

UNICEF and WHO report that in rural India as at 2015, just 1 in 6 persons had water tap in his/her household premises, nearly 1 in 13 people did not have access to improved⁶ source of water, 3 out of 4 people did not have access to improved⁷ sanitation and 3 out of 5 people practiced open defecation (UNICEF-WHO 2015; see Table 1.1).

In Karnataka State as at 2012, 25% of households did not have access to sufficient drinking water throughout the year, 71% of households did not have toilets, 57% of households did not have improved drainage facility and 43% of households did not have access to garbage disposal arrangement (MSPI 2013; see Table 1.2). Also as at 2013, in only 10% of the hamlets every person got the recommended quantity of water (see Table 1.3; RDPR 2014a).

However, studies suggest that local demand for these basic water and sanitation services is very high. For instance, Chhibber, Shastri and Sisson (2004) report, 78% of their respondents complained about inadequate drinking water and 60% complained about inadequate sanitation measures. More recently, Raabe *et al* (2009:44) in their study of Panchayats in Karnataka State report that 57% of respondents complained of insufficient

⁶ An improved drinking-water source is defined as one that, by nature of its construction or through active intervention, is protected from outside contamination, in particular from contamination with faecal matter (UNICEF-WHO 2015)

⁷ An improved sanitation facility is one that *hygienically separates human excreta from human contact*. (UNICEF-WHO 2015).

availability of drinking water, 85% of insufficient public toilets, 87% of poor drainage facilities and 60% of poor maintenance of facilities. Moreover, people are even willing to pay up to Rs 60 (~£0.60) per month for improved services (World Bank 2008a; see also Section 10.2).

Implications of poor provision of basic water and sanitation services are many. Poor sanitation is estimated to account for 9% of total mortality and 10% of disability-adjusted life years in India (Mavalankar and Shankar 2004). The study by Irigoyen (2003, cited in Mavalankar *et al* 2004:2) suggests that doubling access to improved sources of water can increase school enrolment by 20%.

A study by World Bank (WSP 2011b) estimated the cost of inadequate sanitation at 53.8 billion US Dollars annually, which is approximately equivalent to 6.4% of national GDP in the year 2006 and approximately 48 US Dollars per person per year. Lastly, access to toilets enhances dignity, privacy and safety for women and girls in a social context where it is increasingly being at risk (United Nations 2014).

As possible reasons for poor provision; studies by World Bank (2008b; WSP-World Bank 2012) cite overall inefficiency in water supply services, and recommend: enhanced accountability for service delivery, reconciling the vertical gap between bottom-up demand and top-down planning, enhanced community participation at all levels of service provision and improving capability of both the citizens and the Panchayat in managing these services. Ban *et al* (2008) in their analysis of the poor provision of sanitation services in the southern Indian States attribute reasons to a combination of poor demand due to poor awareness about its benefits, poor information about Panchayat's role in the provision of these services; and elite capture of these services.

However, a World Bank (WSP 2010) study finds that 90% of people who practiced open defecation were aware of the health implications of such practice. Studies such as by O'Reilly and Louis (2014), point to factors such as convergence of political will of actors at all levels, peer to peer social pressure and ensured access to water as possible determinants of better levels of sanitation. Similarly, a World Bank study (WSP-MDWS

2014) observes that sanitation programmes yield better results with a community focused approach than with an individual focus, as it provides the necessary mutual support required to overcome certain socio-cultural norms.

For further discussion on this please see Section 10.2

1.4 DOES DELIBERATIVE PARTICIPATION MATTER?

High local demand for basic water and sanitation services on one hand and inadequate access to these services on the other suggests a poor correspondence between citizens' need for local public health goods and provision of these goods by the Panchayats. To understand the possible underlying processes for poor correspondence, perhaps it requires a revisit to the question on, to what extent constitutional empowerment and institutional protection have enabled Panchayats to perform their public good functions.

From the literature reviewed in previous sections, it appears that elections are being held regularly and there seems to be a sufficiency of funds for the provision of basic water and sanitation services. However, the functioning of deliberative participatory institutions such as Grama Sabha has shown unevenness. Though in few separate instances Grama Sabha has shown the ability to improve civic capability; elicit individual preferences and exercise oversight function, more generally, its functioning is constrained by thin attendance, non-representativeness, lack of adequate information among participants, unequal participation in deliberations, preferences of local elites being favoured and inability to collectivize preference in the presence of heterogeneity.

Studies which examined the adequacy of water and sanitation services recommended for better integration of services with Panchayats, better community involvement in all levels of provision of services and improving the capability of both the community and the Panchayat in managing these services and better accountability at the Panchayat level for delivery of services.

Many of above factors fall within the ambit of functions of Grama Sabha. Moreover, there are very few empirical studies which have examined the role of the performance of

deliberative institutions of Panchayat in relation to the provision of local public health goods in a systematic manner.

All these raise the question: *whether and how better participation in deliberative meetings of the Panchayats is associated with the better provision of basic water and sanitation services by the Panchayats.*

Figure 1.1: Devolved Local Governance for Local Public Goods

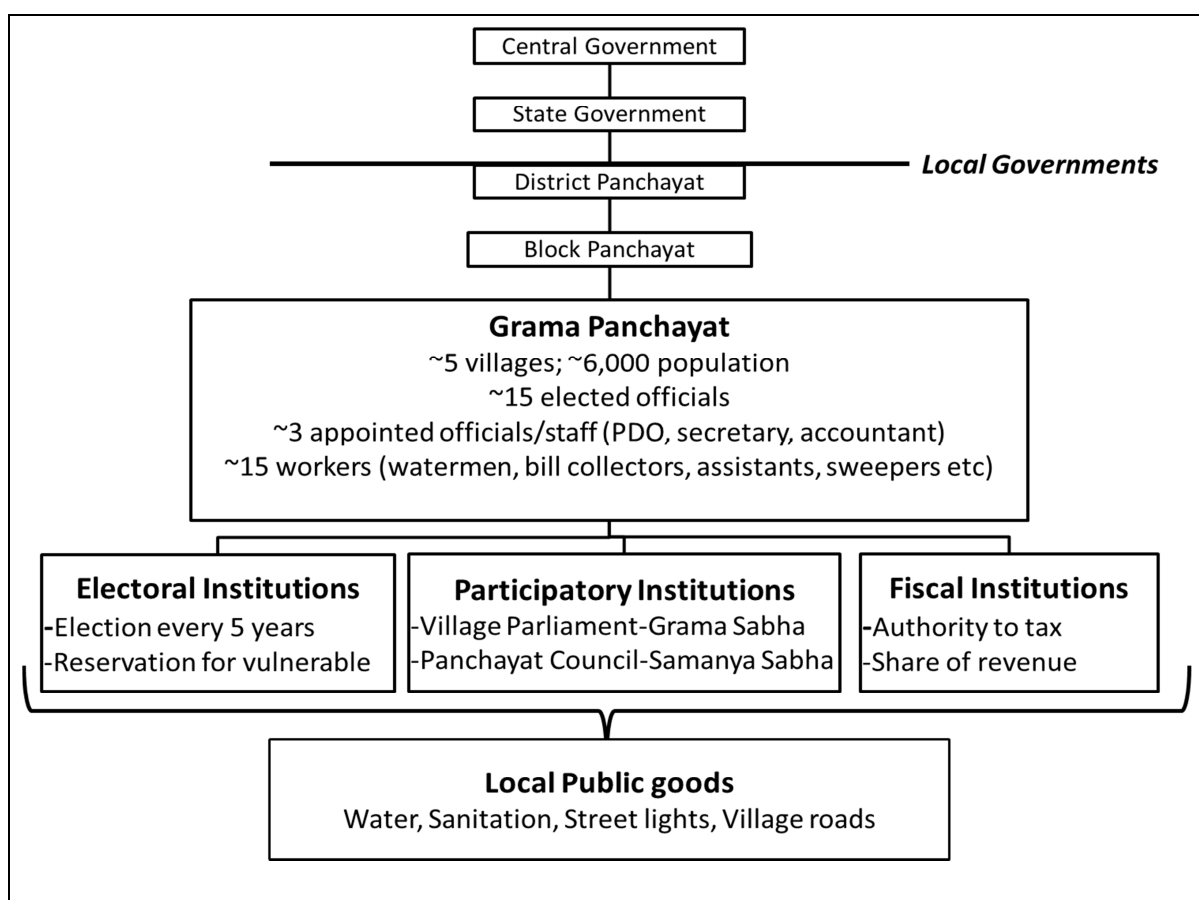


Table 1.1: Percentage of Population Having Access to Water and Sanitation Services in Rural India

	1990 (%)	2000 (%)	2010 (%)	2012 (%)	2015
Percentage of total population living in rural area	74	72	70	68	67
Rural population in millions	646.60	758.81	857.23	840.96	859.20
Percentage of population having access to drinking water					
Improved: piped water supply	7	10	12	14	16
Improved: others	57	66	78	77	77
Unimproved: surface water	4	3	1	1	1
Unimproved: others	32	21	9	8	6
Percentage of population having access to sanitation					
Improved	7	14	23	25	28
Not Improved: shared	1	3	4	5	5
Other unimproved	2	4	6	5	6
Open defecation	90	79	67	65	61
Source: (UNICEF-WHO 2015)					

Table 1.2: Households Not Having Access to Basic Water and Sanitation Services

Indicators (per 1,000 households) (The year 2012)	India	Karnataka State
households not having improved source of drinking water	115	49
households not having sufficient drinking water throughout the year	142	250
Households without toilets	594	708
Household without bathroom	623	481
Households without improved drainage facility	683	567
Household without garbage disposal arrangement	680	431
Source: (MSPI 2013)		

Table 1.3: Percentage of Population in Rural Hamlets Who Have Access to 55 Liters of Water Per Capita Per Day, as at 2013 in Karnataka State

Percentage of population	Hamlets (number)	Hamlets (percentage)
0% population coverage	0	0
0% - 25% population coverage	5,927	10
25% - 50% population coverage	17,704	30
50% - 75% population coverage	20,429	34
75% - 99% population coverage	10,112	16
100% population covered	5,581	10
Source: (RDPR 2014a:97)		

CHAPTER 2: LOCAL GOVERNMENTS, PARTICIPATION AND LOCAL PUBLIC HEALTH GOODS: AN ANALYTICAL FRAMEWORK

Towards answering the question posed in the previous chapter, this chapter provides an analytical framework which attempts to construct pathways which associate deliberative participation with provision of local public health goods. The chapter following this, drawing evidence from theoretical and empirical literature, explains the role of participation in these pathways.

If the functions of the Government finds rationale and legitimacy in provision of local public goods; then decentralisation of the provision to the Local Governments on one hand, and citizen participation in Local governance on the other, are expected to improve correspondence between citizens' preference for these goods and provision of them by the Government (Colomer 2011; Oates 2005; World Bank 2015).

However, variations in terms of What is decentralised? Why is it decentralised? How is it decentralised? and To what extent?; have rendered the performance of Local Governments a complex phenomenon to understand (see Rondinelli *et al* 1983; Crook and Manor 1998; Litvack, Ahmad and Bird 1998; Cheema and Rondinelli 2007; Manor 2011; World Bank 2006; Mansuri and Rao 2013). As experiences of the Panchayats and that of Local Governments elsewhere show, participation can be difficult to achieve and can be uneven across regions, communities, and individuals within a community. Also, more often than not citizens' preferences for local public goods are not satisfactorily met by the Local Government (*ibid*).

Understanding how Local Governments and participation are associated with improving the correspondence between preference and provision, and what determines the variations in this association can be a useful first step in answering whether and how better participation is associated with the better provision of local public health goods.

This chapter first briefly examines the normative and theoretical basis for Local Governments and locates the role of participation in them; then it reviews empirical

evidence on key determinants of performance of Local Governments; and finally integrates these findings into an analytical framework, which attempts to show how these determinants can bear upon participatory institutions in achieving correspondence between preference and provision of local public health goods.

2.1 LOCAL GOVERNMENTS FOR LOCAL PUBLIC HEALTH GOODS: NORMATIVE AND THEORETICAL PERSPECTIVES

Though there is a consensus that provision of local public goods needs to correspond with the preferences for it, allocation of the goods, as in Lasswellian, who should get what and when, and who decides and how; can nonetheless be contentious (Lassewell 1936).

Rawls, in his exposition of justice as fairness, interprets community as a “cooperative venture for mutual advantage” (Rawls 1999:73). Then he explains, the conception of fairness in the allocation of social goods in such a venture should be based on equality of rights to goods, fair equality of opportunities to access them and the largest benefit should accrue to the most disadvantaged in the society (the difference principle) (ibid: 73-78).

Deriving from this, the normative criteria of responsiveness suggests allocation of public goods should be flexible to heterogeneous or time varying needs of the community; such that, the policy weight for allocation should approximate to the welfare weights; which are derived based on demographic weights and relative need (Bardhan and Mookherjee 2006:4). In other words, the policy weight should be horizontally equitable in promoting equal opportunities (access) for equal needs, and vertically equitable in promoting unequal opportunities for unequal needs (Wagstaff and Doorslaer 2000).

The normative criteria of democratic accountability suggests mechanisms should exist through which citizens can exert pressure on the Government to ensure provision of public goods approximate to the policy weight and hence to the welfare weight (Bardhan and Mookherjee 2006:4) or in other words, to ensure sensitivity of the policy outcomes to local preferences (Oates 2005:357).

However, achieving responsiveness is not easy as there is significant diversity both in spatial characteristics ('localness' or area of benefit) of local public health goods, and in individuals' preferences for them (see Tanzi 1995:298). For instance, a hand operated tube well might benefit households within a street, an open well might benefit one section of the village and a water tank might benefit the entire village. Some individuals may prefer the open well as the water tastes better, while some other may prefer tube well as the water is more hygienic.

The Central Government might ignore this diversity or might not be well informed about it or it might be costly in term of time, money and coordination, for it to collect this information and map it into its policy objectives (Oates 1972:30-36). Moreover, given the distance between the local citizen and the Central Government, it is difficult to exercise accountability by the former on the latter. These factors may decrease the correspondence between preference and provision.

So, Oates (1972, 2005) in his decentralisation theorem proposed, to achieve ex-ante⁸ 'perfect correspondence' between preference and provision, jurisdiction that determines the level of provision of each public good precisely includes the set of individuals who consume it so that benefits are completely internalised; and the users are charged a benefit fee (the transactional costs⁹ related to acquiring property rights to access, withdrawal and management of these services), so that marginal benefit equals the marginal cost thereby achieving fiscal equivalence proposed by Olson (1969). Also,

⁸ For an ex-post argument for decentralisation based on conception that people will vote with their feet see Teibout (1956) and Oates (2005:3).

⁹ Provision of a good involves transformation cost and transaction cost. From the consumer perspective transformation (productive) cost is fixed and the transaction costs are variable (North 1990). Transaction costs are the costs of exchanges that arise beyond the point of production of a good to effect its allocation (Klaes 2001). Broadly these costs are (1) costs of defining and measuring the attributes of the goods involved in the exchange (2) cost of gaining, protecting, enforcing and monitoring the contracts determining rights over the attributes which are being transferred and (3) cost of obtaining and ascertaining information on attributes and rights (for details see Dahlman 1979; Williamson 2007; Coase 1974; Eggertsson 1990; Cheung 1974).

observability of the provider's action due to proximity to the consumer can ensure accountability in this process¹⁰ (Seabright 1996; Oates 2005).

Establishing Local Governments at the jurisdictional level is expected to serve this purpose. Fundamental to the conception of Local Governments is; if individuals are responsible for results of their actions and have ownership rights over the outcomes¹¹, then they will have a stronger incentive to perform better (Tanzi 1995:300); and that there is heterogeneity in preferences between jurisdictions and homogeneity within the jurisdiction with low inter-jurisdictional externalities (Besley and Coate 2003).

Among many forms of local governance systems (see Rondinelli *et al* 1983:13-28 for full discussion), the devolved form gives Local Governments, within the broader framework of the national constitution, a legally recognised territory, over which they can exercise authority and within which they have responsibility for performing local public good functions within an institutional framework (Crook and Manor 1998:6-7; Triesman 2007: 23-28; Pollitt 2009:373-74; Faguet 2005). Panchayats are such devolved Local Governments.

Within the devolved Local Governments the participatory institutions are expected to serve as a mechanism; ex-ante, to gather information on preferences of the citizens on their common feasible local public goods needs and communicate it to the Local Government as a collective demand; and ex-post, to exercise oversight oversupply of them (World Bank 2015). This can give participants a sense of responsibility for their action, sense of ownership over the outcomes of their participatory exercises and hence possibly incentivises participation. In turn, Local Governments can make participation happen in contexts where such opportunities do not exist (*ibid*).

¹⁰ Apart from this economic argument, there is also political argument for decentralisation that due to compulsion of democratic politics, central government may not be able to differentiate between regions based on preferences, even if it has the information on preference (see Besley and Coate 2003).

¹¹ This corresponds closely to the notion of principle of subsidiarity. This principle states public responsibilities should be exercised by those authorities who are closest to the citizens and tasks are transferred to institutions at lower level that are best capable of completing them (cited in UCLG 2015).

So, participation and Local Governments share a symbiotic relationship in improving the correspondence between preference and provision in a responsive and accountable manner (World Bank 2015).

2.2 PERFORMANCE OF THE LOCAL GOVERNMENTS: WHAT WORKS, WHAT DOESN'T AND WHY

A review of the empirical literature on the performance of the Local Governments suggests (see Appendix A.1 for a brief review of individual studies), some of the key determinants in achieving correspondence between preference and provision in a responsive and accountable manner are:

1. Behaviour of higher level Government; as in political will, bureaucratic support and non-interference in Local Government functions (Rondinelli *et al* 1983);
2. Nature of the public good and the level of the Local Government at which it is provided; as this involves a trade-off between economic efficiency, cost of coordination, and accountability (Prud'Homme 1995; Seabright 1996);
3. Design of the institutional arrangements (Tanzi 1995; Bardhan and Mookherjee 2001; Treisman 2007); such as
 - a. Political institutions which incentivise participation from all sections
 - b. Bureaucratic institutions which clearly and transparently state the rules, roles, and provide adequate information on them, and
 - c. Fiscal institutions which balance revenue raising with revenue expenditure
4. Political capability to elicit preference and bureaucratic capability to deliver services according to these preferences (Litvack, Ahmad and Bird 1998; Ayers 2003);
5. Mechanisms to exercise oversight, formal or informal (Ayers 2003);
6. Extent of citizen engagement with political institutions through political and social mobilization in the community (Crooks and Manor 1998);
7. Broader political situation in which the Local Government is embedded; as in political stability, free and competitive elections, presence of rule of law and independent sources of information (Bardhan and Mookherjee 2006; Grindle 2007);
8. Balance of power between economic (private) actors, political actors and civil society actors such that one cannot distort the other (Faguet and Sanchez 2008); and

9. Social cohesion in the community, a function of the level and distribution of socio-economic inequality, social capital and the ethnic and religious heterogeneity (Putnam 1993; Tadros 2013; Marc, Willman, Aslam *et al* 2013).

Though these studies have identified a number of variables, they do not clearly explain the mechanism through which these variables operate in influencing correspondence between preference and provision. To be able to do so, this research makes use of the Institutional Analysis Development Framework (IAD) developed by Elinor Ostrom and her colleagues (Ostrom 2005; Ostrom 2011; McGinnis 2011).

2.3 LOCAL GOVERNMENTS FOR LOCAL PUBLIC HEALTH GOODS: AN ANALYTICAL FRAMEWORK

Men are born free but are chained by institutions
Rousseau

In a community collective preference is a function of individual preferences (Sen 1970). The local public health goods, within their area of benefit, are collectively desired but beyond individual means. Once provided these goods are binding on everybody as they are typically non-divisible and non-excludable. However, variations in spatial characteristics of these goods and in preferences for them, renders collectivising them difficult and achieving correspondence sub-optimal.

Politics is about cooperation and coordination efforts of humans attempting to co-exist in an interdependent relationship in a community (Milbrath 1965:1). Being political is about pursuing collective interests of the community (Colomer 2011:9-11). The political actors are collective actors (Scharpf 1997, cited in Ostrom 2005:39) and the set of actions by these actors aimed at realizing their collective interest (Choice) is defined as collective action (Marwell and Oliver 1993:4).

The propensity of a political actor to participate in collective action is a function of perceived benefits from the output of the collective action, the probability that his/her participation contributes to the materialization of the output and the transactional cost incurred by the actor to participate (Colomer 2011).

The type of incentive used by the actors to value the output determines their behaviour in the collective action (see Colomer 2011:9-11). These incentives can vary from the material as in Madisonian protection of self-interest guided by the logic of consequences to solidary/purposive as in Tocquevillian fulfilling a sense of duty guided by the logic of appropriateness (Campbell 2006:2-5, March and Olsen 2008, Marwell and Oliver 1993:4-14).

The institutions are a set of humanly devised informal norms, formal rules and enforcement mechanisms; which constrain and shape individual behaviour in collective action situations (North 1990:4-5; Ostrom 2005:3; Kiser and Ostrom 1982) towards achieving their collective interest.

Institutional analysis is a systematic study of how the institutions evolve, how do they interact with each other and how do they influence individual and collective behaviour in political, social and economic situations (see Ostrom 2005; North 1990). A review of literature suggests three approaches for conducting institutional analysis.

First, the literature related to fiscal federalism analyse the performance of political, fiscal and administrative institutions as against the type of local governance: deconcentration, decentralization, and devolution. This approach is useful in examining the effectiveness of different designs of the institutions (See Rondinelli *et al* 1983; World Bank 2001, 2004, 2006; Cheema *et al* 2007).

Second, the literature related to social psychology analyse the institutional performance from their ability to promote collectiveness in the community (Marwell and Oliver 1993; Searle 2002; Coleman 1986). This approach is useful in examining the influence of social dilemma, free-riding and heterogeneity on institutional performance.

Third, the literature related to New Institutional Economics (NIE) analyse how economic incentives influence the individual behaviour in collective action situation. This approach relaxes some of the assumptions of neo-classical economics by accounting for information asymmetry, transactional costs and bounded rationality in explaining the incentives which

shape individuals' choice in situations involving economic exchange (North 1990; Ostrom 2005; Williamson 1996; Coase 1974).

The Institutional Analysis Development (IAD) framework, rooted in NIE, was developed by Elinor Ostrom and her colleagues. This framework has been widely used to analyse the performance of institutional arrangements for provision and management of local public goods in diverse collective action settings (McGinnis 2011). The IAD framework not only affords analyses of institutions at each level, but also allows integration of different theoretical approaches at a given level, and for modeling under each theoretical concept (Ostrom 2005:27-28). In addition, the framework also allows for examination of the influence of variables exogenous to institutional arrangements, on their performance, and provides for the specification of evaluative criteria for the organisation's performance (ibid).

This research uses the IAD framework to combine the relevant elements and concepts in the above three approaches to institutional analysis, to explain the collective action for local public health goods.

2.3.1 The Institutional Analysis Development (IAD) Framework

The IAD framework considers organisation, as a body composite of collective actors, formed with an objective to realise their local public good needs. Within the organization, action situations are the arenas where these actors interact repetitively to create policy choices for achieving their objective (see McGinnis 2011:173).

The institutions of the organisation can be hierarchical, with each level defining the scope of the next level (Ostrom 2005:58-59). At the highest level are, the constitutional level institutions, which define the overall scope of the organisation, its jurisdiction, its objective and its individuals. At the next level are collective choice institutions, the political institutions, which facilitate the political process of policy formulation through identifying the most common of all the individual preference which exist in the community in a responsive manner (such that it benefits the largest section of the community) and frame it as a collective demand, through policy objective. At the lowest level are the operational

level institutions, the bureaucratic institutions, which facilitate the bureaucratic process of policy administration through rule-bound conversion of policy objectives into the supply of local public health goods in an accountable manner (ibid; see Anderson 1975:79).

Based on this framework, this research models Panchayat as an organisation with an objective to provide local public goods in engagement with the local citizens and in accordance with their common feasible preferences. The local citizens, the elected members and the bureaucrats constitute its body composite of collective actors. The deliberative participatory meetings of Grama Sabha and Samanya Sabha serve as action situation arenas. The constitutional level institutions are The 1992 Constitutional Amendment Act, State level Panchayat act, the Election Commission and the Finance Commission. The collective choice level institutions are Sections of the 1993 Act which define the functioning of the participatory institutions such as Grama Sabha and Samanya Sabha. The operational level institutions are Sections of the 1993 Act which define bureaucratic processes/procedures. The criteria for evaluation of Panchayat's performance are responsiveness in policy formulation and accountability in policy administration. [See Figure 2.2 for a schematic representation of the institutional arrangements and the factors influencing their performance.](#)

The constitutional level institutions at the level of a given State are uniformly applicable to all Panchayats in that State. Hence variations in achieving correspondence between preference and provision, within a given State, *ceteris paribus*, can be due to variations in performance of collective choice level institutions and operational level institutions.

2.4 PARTICIPATORY POLITICAL INSTITUTIONS AS COLLECTIVE CHOICE INSTITUTIONS

So far we have discussed the local public health goods are collectively, provided and consumed; due to their binding nature and difficulty to exclude. Also, these goods vary in their spatial characteristics and individuals' preferences for them. Hence, achieving correspondence between preference and provision requires collective action to arrive at the collective choice among the individual preferences, which benefits the largest section of the community.

The participatory political institutions serve to improve collective action in two ways. First, they incentivise participation by all members of the community (or their representativeness) and improve their capability to articulate, communicate and then collectivise their individual preferences into a single peaked collective choice¹² as the policy objective (see Almond and Coleman 1960:17). Second, they facilitate the exercise of oversight over the rule-bound conversion of policy objectives into the supply of public health goods in an accountable manner through rulemaking, rule application and rule adjudication at the operational level (ibid; see also Moe 1990).

Two dominant institutional modes to arrive at the collective choice are the aggregative mode and the deliberative mode (March and Olsen 1989:117-134; Rothstein 1996:146-48; Lane and Ersson 1999:29-36). In the aggregative mode the individual preferences are exogenous to the institution and are not influenced by the institution, and the institution provides a mechanism to constrain and collectivise these preferences through rule-based aggregation (ibid). In the deliberative mode, the preferences are endogenous to the institution and are shaped by the institutional design. The institution provides a mechanism to generate and integrate preferences through public deliberation (ibid).

These two modes supplement each other depending on the institutional design and the context (March and Olsen 2006:16). The collective choice arrived through either of these mode gains legitimacy through two perspectives, input perspective (majority consent of those bound by the decision) and an output perspective (for the common good of the community) (see Manin 1987; Scharpf 1997:152-55).

Attributes of the local public health good, attributes of the individual collective actor and the attributes of their community; play a key role in performance of participatory political institutions (see Baland and Platteau 2000; Ostrom 2005; Poteete and Ostrom 2004) in arriving at the collective choice in a responsive manner (see Figure 2.2).

¹² This research uses collective choice and collective preference synonymously.

2.4.1 Attributes of the Local Public Health Goods

The local public health goods are impure public goods as attributes of non-divisibility, non-excludability and non-subtractability are varyingly present in them (see Samuelson 1954:387; 1955:877; Sandmo 2008). These attributes are defined more by the complex property rights related to their access, withdrawal and management, rather than the nature of the goods themselves (see Cornes and Sandler 1996:8-10). For instance, a water tap located inside the household premises is a private good and the same tap if it is located in a public space like a street/park assumes characters of a public good. These attributes can bear upon collective choice functions in several ways:

1. Inter-jurisdictional externalities or spillover effects of the local public health good (Besley and Coate 2003, Oates 1972): For instance, if clearing a mosquito breeding swamp in its jurisdiction by Panchayat A, benefits adjacently located Panchayat B from which it does not receive any economic compensation; then people in Panchayat A will be less inclined to bear the cost of provision of this service, as they cannot exclude people of Panchayat B benefitting from it.
2. Non-divisibility nature of the goods (Kiser and Ostrom 1982): For instance benefits of maintenance of roadside drains or keeping track of the amount of water drawn from an open well, make it difficult to estimate the individual benefit and appropriate the cost for it.
3. Difficulties in achieving correspondence between preference and provision due to non-excludability (Kiser and Ostrom 1982), differing spatial characteristics and differing preferences: For instance, an individual may not prefer fluoridation of water, however, has no choice but to consume fluoridated water supplied through public system, as alternatives may not exist or might be too costly.
4. Congestion arising due to degree of subtractability (Olson 1965, Marwell and Oliver 1993:58-65; Ostrom 2002; see also Oliver 1993): Goods which suffer from higher subtractability (exclusive public goods with concave production function) tends to elicit less participation, as with addition of each participant, the per capita availability of benefit from the good decreases, and coordination cost rises; for instance as in hand

operated tube well. As against this, good whose benefit is less subtractable (inclusive public good with convex production function) tends to elicit higher participation, as with the addition of each participant chances of materializing the benefit increases; for instance as in having an overhead water tank for the entire village.

2.4.2 Attributes of the Individual: Preferences Articulation and the Role of Information

More often than not citizens do not always get their preferred choice of public health goods and they must select from a set of available/feasible choices (Sniderman and Levendusky 2007: 438). This is due to differing spatial characteristics of public health goods, differing preferences for them, differing resources available and the technical constraints in their provision.

For citizens to be aware of these possible choices and then to be able to articulate their preferences for these choices, they need to have information on

1. Possible health benefits of consuming the public health goods
2. Different public health goods which are available/feasible to provide
3. Property rights of each public health good in terms of eligibility to access them, their share of allocation (withdrawal) and the management of services (see Schlager and Ostrom 1992; Ostrom and Hess 2007)
4. Collective choice rules related to allocation of above property rights (Ostrom 2005:58-61)
5. Preferences of other individuals (Schofield 1985) and
6. Transaction cost involved in securing the above information.

The above set of information together constitutes an individual's information structure (Phlips 1988:1-4) vis-a-vis local public health goods.

When the information structure is complete, individuals' preferences for a particular choice set of public health goods, guided by a utility maximizing motive, can be expected to be rational, consistent, homogeneous, and hence easy to collectivise them into single peaked common preference (see Heap, Hollis and Lyons *et al.* 1992:4-14; Ostrom 2005:104-9) .

However, when the information structure is incomplete individuals' preferences become uncertain. In forming their preference, different individuals select different norms and conventions (heuristics) to overcome uncertainty with a utility satisficing motive (Simon 1986:25-40; North 1990:15-19, Ostrom 2005:104-9; Kahneman and Taversky 1979). This can lead to a disparate set of heterogeneous preferences rendering collectivisation of them difficult.

For a complete discussion on this topic please see Section 6.1 and 6.2.

2.4.3 Attributes of the Individual: Preference Communication and the Role of Political Efficacy

In the context of collective choice, the individuals need to communicate their articulated preference. This communication, termed as the political voice, serves two democratic purposes: Informing other participants about their preference and persuading them to reciprocate to it (Scholzman, Verba and Brady 2012:2). To achieve this, individuals need to communicate their preferences effectively in a loud and clear voice. For this, it is necessary for them to perceive that their voice matters (Couldry 2010:1-5), which stems from their sense of political efficacy (Bandura 1997:482-85).

The political efficacy has two dimensions. Internal political efficacy is a perception about one's own competence to understand and to participate effectively in politics, whereas, external political efficacy is the perceived responsiveness of the system/leaders/institutions, to individuals' needs and their attempts to influence their functioning (Balch 1974; Converse 1972; Craig and Maggiotta 1982:86).

In the collective choice situation, It is not just the total number of preferences that are communicated is important; where they are coming from and how representative are they of the preferences which exist in the community is also equally important (Scholzman, Verba and Brady 2012: Ch.1). However, as empirical evidence suggest, participation in many instances are non-representative. Moreover, the voices of the participants may differ in their ability to convey: Information about their preferences, the intensity of their

preference, and in their effectiveness (loudness) in urging others to reciprocate to it (see Scholzman, Verba and Brady 2012:13); due to differing levels of political efficacy.

The non-representative participation and differing levels of political efficacy and voice is not random in distribution in a given community and generally parallel the common fault lines along the distribution of socio-economic resources (Verba, Scholzman and Brady 1995:10-16). As results, in the collective choice situation, we often hear the 'heavenly chorus singing with an upper-class accent' (Chattschneider 1960 cited in Scholzman, Verba and Brady 2012:2-6); with collective preferences biased towards those who participate and have better political efficacy and hence louder voice.

For those individuals with low political efficacy and weak voice which is not heard, cost of participation will be higher than the benefits, and with mobility to another jurisdiction as proposed by Tiebout (1956) or switching to another provider of public goods, being not an option, they 'exit' from the collective action situation (see Hirschman 1970). Extent to which voice (contribution) and exit (departure) act as substitutes or complementary to each other depends on the sensitivity of the institutional arrangements for unequal voice, loyalty of the individual to the community/group to which (s)he belongs and cohesiveness in the community which permit/allow such exit (see Hirschman 1970:77-78, 1978)¹³.

For a complete discussion on this topic please see Section 7.1 and 7.2.

2.4.4 Attributes of the Community: Collectivising the Preferences and the Sense of Community

Social cohesion is a necessity, and mankind has never yet succeeded in enforcing cohesion by merely rational argument
Bertrand Russell

After articulation and communication of their preferences by the individual participants, the next step is collectivisation¹⁴ of these individual preferences into a common preference in line with the criteria of responsiveness. Given the nature of the local public health

¹³ For a critical review of binary nature of the exit, voice and loyalty as proposed by Hirschman, see Barry 1974 and Dowding, John, Mergoupis *et al.* 2000

¹⁴ The term collectivisation refers to the process of gathering all the individual preferences and then arriving (identifying) at the most common of these preferences which benefits the largest section of the community

goods, be it the supply of drinking water or maintenance of sewers/drains; it requires sustained collective action for their continued provision.

The problems of social dilemma, free riding and heterogeneity in the community reduce the tractability of the collective action. Olson (1965) emphatically argued that “rational self-interested individuals will not act to achieve their common or group interests” as private costs and social benefits create a social dilemma. Given the difficulty in excluding individuals from benefitting from public health goods once provided; incentivises individuals to free ride on efforts of others by not participating. In a given community, inequality among individuals due to endowments, political connections, wealth, entitlements or cultural factors (Vedeld 2000) may lead to heterogeneous preferences, different affinities with each other and different values about sharing benefit and costs; thereby rendering collectivisation of preferences difficult (Bandiera, Barankay and Rasul 2005).

However, collective action is pervasive in our social life and people do participate in them (Marwell and Oliver 1993:6). A closer examination of the theories and constructs which attempt to explain collective action (see Ch.8), suggest achieving and sustaining collective action require an institutional mechanism which incentivises development among participants of co-operative goals and coordinated strategies to find mutuality in each other’s concerns (see Saavedra, Earley and Van Dyne 1993).

In a community, the degree of cooperation and coordination achieved depends on the extent to which there is shared understanding of each other’s needs and socio-cultural values (Kiser and Ostrom 1982). Such a shared understanding provides a common base for arriving at the collective preferences and increases the predictability of the interactions (Fearon and Laitin, 1996).

Such a convergence, termed as social cohesion, is operationalized as the psychological sense of community (Perkins, Florin, Rich *et al* 1990; Sampson, Raudenbush and Earls 1997; Glynn 1981, Buckner 1988). This is defined as “a feeling that members have of belonging to the group, a feeling that members matter to one another and to the group,

and a shared faith that members' needs will be met through their commitment together" (McMillan and Chavis, 1986: 9).

This manifests at the individual level as a sense of mutuality and a willingness to intervene on behalf of the common good of the community (Sampson, Raudenbush and Earls 1997:258). In other words, it reflects an individual member's belief in the community, about its conjoint capability to organise and execute the course of action required to sustain desired levels of provision (Bandura 1997:477). Or more simply, trust in the effectiveness of the organised community action (Perkins and Long 2002:295).

2.5 BUREAUCRATIC INSTITUTIONS AS OPERATIONAL LEVEL INSTITUTIONS: CREDIBLE COMMITMENT AND THE RULE OF LAW

The bonds of words are too weak to bridle men's avarice
Thomas Hobbes

The second role of the collective choice institutions is to exercise oversight over the rule-bound conversion of policy objectives into the supply of public health goods by the operational level actors in an accountable manner (see Ostrom 2005:56-61).

Inherent to this process is the principal-agent relationships between collective choice level actors as principals and operational level actors as their agents (Moe 1984; Miller 2005). By definition principal-agent relationship is characterised by the asymmetry of authority with principal having authority over agents; and asymmetry of information structure with agents having better information structure as compared to principals over the rules (Martimort 2008).

The principals delegate their authority with necessary discretion to the agents for administering their policy objectives through a contractual agreement, and in turn expect accountability from the agents as in faithful policy administration in compliance with the contractual rules (Moe 1984, 2013; Miller 2005; see also Bolton and Dewatripont 2005; Martimort 2008). In such rule-based governance agent's commitment to the rules is measured as rule of law, the gap between rules in form (de jure) and rule in use (de facto)

(see Ostrom 2005:186). The two key concerns in rule-of-law are the extent of credibility of agent's commitment to the rules and dilemmas inherent in the exercise of accountability.

The inherent informational advantage of the agent over the principals gives rise to adverse selection problems (ibid). Also, in the context of multiple principals and multiple agents (Moe 2013), non-observability of the agent's efforts can lead to moral hazard problems such as shirking by the agents (Alchian and Demetz 1972). Given the complexity of the situation, the cost of information and boundedness of rationality, the contracts are essentially incomplete necessitating discretion in the interpretation of rules (Dixit 1996:20, See also Hart 2008, North 1990a:52-53). However, this scope for differential interpretation of rules, especially in the context of private information due to adverse selection and negative externality due to moral hazard, incentivises opportunistic behaviour among agents, who renege on their commitments (Williamson 1996:225) by transgressing the rules to engage in corrupt practices defined as breaking of the rules (Banerjee, Hanna and Mullainathan 2013).

Also in a rule-based governance, the exercise of accountability creates certain inherent dilemmas in terms of, accountable by whom, to whom for what, why and how (Behn 2001:1-21; March and Olsen 1995:141-183). Adherence to rules can be seen as red tape by some and as fairness and equality by some others. Such dilemmas can lead to a trade-off between procedural correctness and performance effectiveness of operational level actors (Moe 2013).

For a full discussion of this topic please see Section 9.1 and 9.2.

2.6 PARTICIPATION FOR LOCAL PUBLIC HEALTH GOODS: LOGIC OF COLLECTIVE 'IN' ACTION

In the context of Local governance, participatory institutions facilitate collective action for achieving correspondence between citizens' preference for local public health goods and the provision of it by the Local Government, in two ways. First, they facilitate collectivisation of the most common of all the individual preference which exist in the community in a responsive manner and frame it as a collective demand, through policy

objective, for provision by the Panchayats. Second, they exercise oversight on rule-bound conversion of these policy objectives into the supply of local public health goods in an accountable manner. Variance in performance of these institutions and hence in achieving correspondence, can be due to variations in level and distribution of information structure, political efficacy and sense of community among the participants, which determines their capability to articulate, communicate and collectivise the preferences respectively; and the ability of the operational level actors to credibly commit to the rules (See Figure 2.1 for schematic representation).

Distribution of information structure and the political efficacy in a community is not random and generally parallels the distribution of socio-economic resources. This, in a weakly cohesive community, gives those individuals from higher socio-economic strata better bargaining advantage in securing the property rights of local public health goods at the expense of individuals from poorer and disadvantaged section of the community in collective action scenario.

At the operational level, non-observability and non-verifiability of bureaucratic efforts on one hand and, the incompleteness of the rules on the other incentivises bureaucrats to renege on their commitment and collude with other influential collective actors to engage in corrupt practices ranging from shirking of responsibility to rent seeking to capture of public good for private gain. Given the bluntness of elections as an accountability tool (Scholzman, Verba and Brady 2012:3); it is optimal for even collective choice actors (elected members) to collude with bureaucrats to engage in client politics by under-providing local public health goods of broader preference (higher spill over effect and difficult to exclude) and over providing club/private goods of narrower preference (lower spill over effect and easy to exclude) to their constituencies (see Chhibber 2004, Persson and Tabellini 2000:75).

The outcome of all these maneuvers is that the benefits of participation in collective action gravitate towards few elites, whereas, the costs of participation diffuses to all (see Wilson 1989:76). Given that propensity to participate in collective action is sensitive to

appropriate realisation of net gains; this misappropriation leads to 'exit' of individuals and groups with minimal bargaining power leading to reduced participation both in number and representation in a collective action situation. For politicians and bureaucrats, this provides incentives to renege further, by providing more club/private goods in preference over public health goods, to secure the interests of their followers and to maximise their own wealth. All these may provide an explanation for "why citizens can't participate, not asked to participate and don't want to participate" (Verba, Scholzman and Brady 1995:16) leading to ineffectual collective action resulting in the inadequate provision of local public health goods which is neither responsive nor accountable.

Figure 2.1: Schematic Representation of some of the determinants of success of collective action for local public health goods

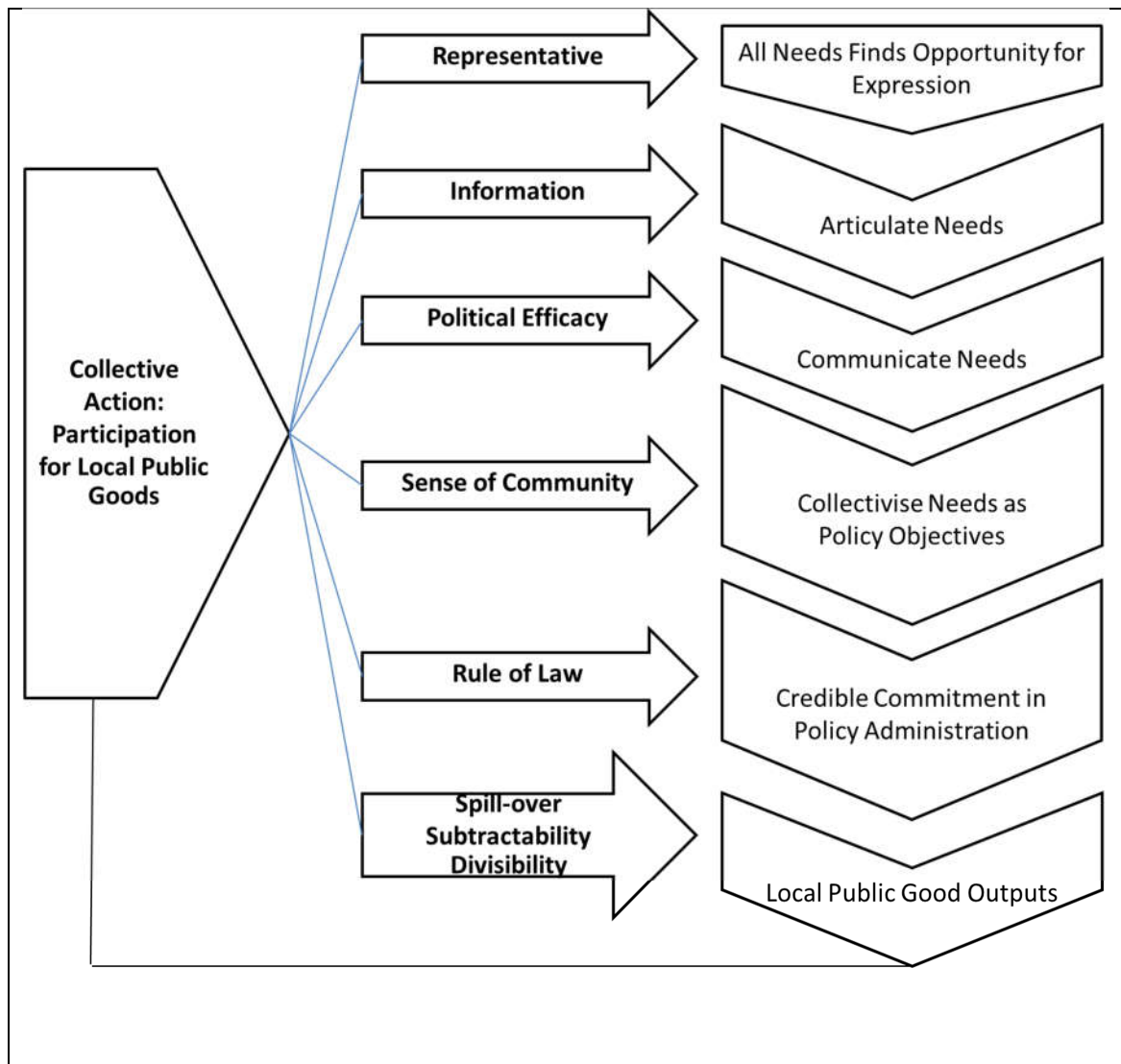
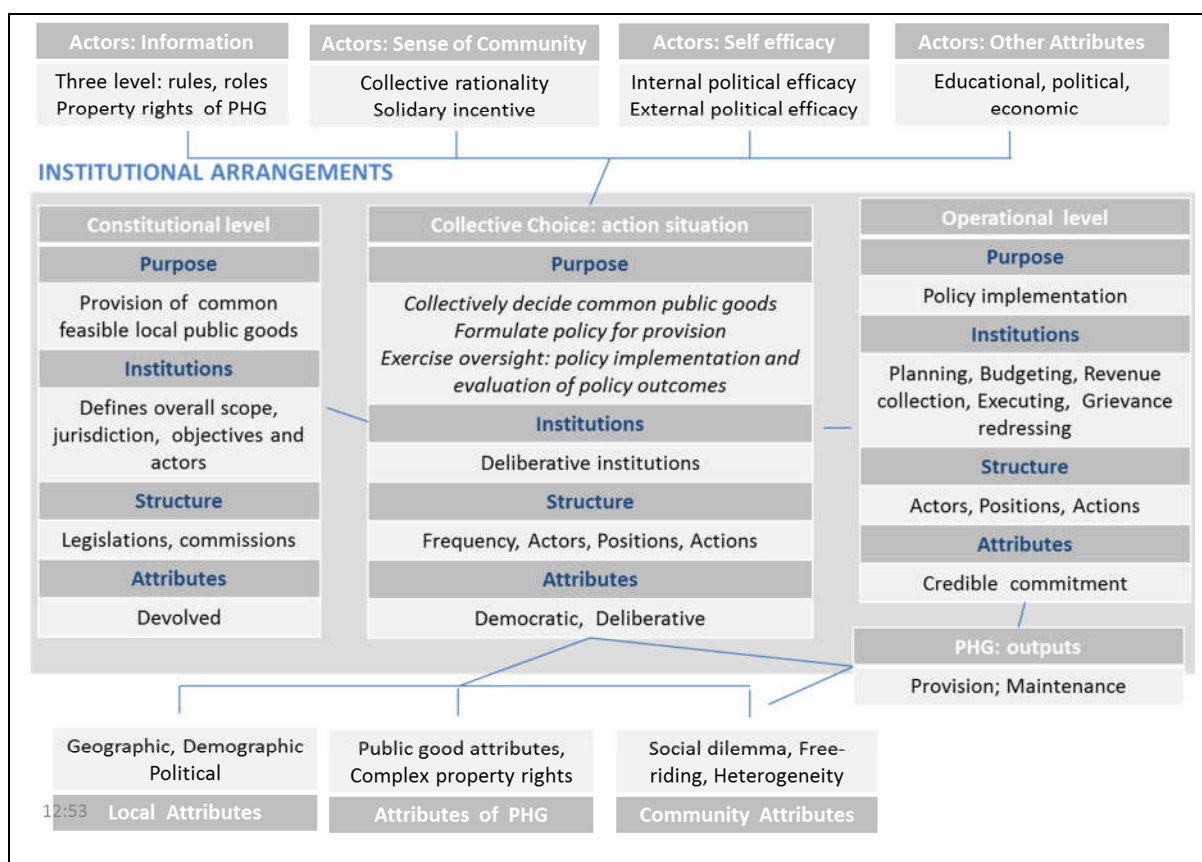


Figure 2.2: Schematic Representation of institutional arrangements and the factors influencing their performance



CHAPTER 3: DELIBERATIVE PARTICIPATION: THEORY, EMPIRICS AND PROPOSITIONS

In the conduct of life, we make use of deliberation to justify ourselves in doing what we want to do
William Somerset Maugham

The previous chapter discussed achieving correspondence between preference and provision of local public health goods requires collective action. The participatory political institutions can improve collective action by facilitating, identification of the commonly preferred local public goods and exercise of oversight over the rule-bound provision of it. Then it explained sustenance of collective action requires cooperative goals and coordinated strategies to find mutual needs and seek convergence when they are heterogeneous. Under conditions of inequality among actors in participatory situations, be it in information, political efficacy and sense of community; or their inability to commit credibly to the rules of the law, the performance of participatory institutions can be sub-optimal and collective action may not sustain.

The political institutions of public deliberation, due to their ability to resolve conflicts, clarify moral dilemmas, improve knowledge and forge coordination, in a cooperative manner, are gaining salience in collective action situations in fields as diverse as ecological economics, science and technology, philosophy, communications, policy analysis, criminal justice, social psychology, game theory, and development studies (Dryzek 2010:3; Gutmann and Thompson 2004:13-21; Chambers 2003:307).

These institutions of public deliberation are transforming the perception of political institutions from mechanical aggregators of exogenous preferences to integrators of discursively generated endogenous preferences. Such is their appeal, Gutmann and Thompson (2004: vii) notes, “no subject has been more discussed in political theory in the last two decades than deliberative democracy” and according to Dryzek (2007:237) “(it is) the most active area of political theory in its entirety”. Moreover, there is a widespread interest to make real-world politics more deliberative through institutional innovations and improvisations (see Smith 2009).

Public deliberation¹⁵ conceptually draws from a set of closely related theories in political philosophy (Rawls 1999; Habermas 1989, 1996), democracy (Elster 1998; Fishkin 2009), political communication (Gastil 2000, 2008) and participatory governance (Fung 2001, 2003). The basic premise is, in complex collective choice situations, consensual construction of preference in a social manner through informed, respectful and competent discussion involving those responsible for making the collective choice as well as those affected by the collective choice, is fundamental to achieve sustained success (Gutman and Thompson 2004, Dryzek 2010).

This chapter, drawing support from theoretical and empirical literature, attempts to show that institutions of public deliberation can provide the necessary mechanisms to achieve and sustain the collective action for local public health goods.

The first section briefly traces the history of deliberation in democratic politics. The second section theorises on what constitutes deliberation. The third section describes the rules governing deliberative participation. The fourth and fifth sections discuss the outcome of the deliberative process and its limitation respectively. The final section concludes with a set of propositions to answer the question posed at the end of the first chapter.

3.1 DELIBERATION IN DEMOCRATIC POLITICS

Deliberation and debate are the ways you stir the soul of our democracy
Jesse Jackson

The idea of deliberation in politics can be traced to 5th Century B.C. Athenian direct democracy which considered ‘discussion as indispensable preliminary to any wise action’ (cited in Gutmann and Thompson 2004:8). More recently, Burke in 1774 asserted ‘Parliament is not a congress of ambassadors of different and hostile interests ... but a deliberative assembly of one nation’ (cited in Elster 1998:3). On a similar note, Sieyes in 1789 observed democracy in achieving ‘national common will is not a question of election, but of proposing, listening, concerting and changing one’s opinion in order to find the

¹⁵ This research uses deliberation, group deliberation, deliberative participation, public deliberation and discursive participation synonymously.

common in common will' (cited in Elster 1998:3). Mills advocated a 'Government by discussion' on the grounds of human fallibility and suggested deliberation 'fosters self-correction' (see Holmes, 1988:20-56). Hume, though agreed to this in principle, however, disagreed about its role in correcting 'knave politicians' (cited in Elster 1998:4).

In the last century, deliberation gained prominence when Rawls proposed internal moral deliberation in the minds of each reflective individual to achieve fairness in justice (Rawls 1999). Later it found revival in Laslett's (1975) 'face to face' discussion as a preface to decision making and in Fishkin's (1995) voice to the people through 'deliberative polling'. However, what really caught the imagination of theorists, philosophers, practitioners and this researcher alike was the idea proposed by Habermas (1989,1996) that democracy revolves around transformation through deliberation rather than a mere aggregation of preferences.

3.2 THEORIZING WHAT CONSTITUTES AS DELIBERATION

The fundamental source of legitimacy is collective judgement of the people
Jürgen Habermas

Cohen (1997) elaborating on Rawls' conception of justice as fairness in allocation of social goods (see Section 2.1), reasoned; achieving fairness fundamentally requires formation of consensual conception among citizens on what is good for the community, in an environment which provides them with a manifest sense of equality, and through a process which shapes their identity and preferences. He then argued, public deliberation could serve this purpose by improving knowledge, developing political competence, building civic friendship and by shaping the ethos of political culture (ibid: 18-20; see also Verba, Scholzman and Brady 1995; Sen 2000; Pateman 1970; Gastil, Deess and Weiser 2002:587).

However, there is considerable debate in the literature on what constitutes as public deliberation (see Carpinì, Cooks and Jacobs 2004 for a review). For Habermas (1989, 1996) it is the nature of public sphere in which deliberation happens; for Manin (1987) it is about legitimacy; for Stokes (1998) it is the outcome of preference transformation; for Gambetta

(1998) it is the process of listening and speaking sequentially; for Cohen (1997) it is philosophical as free and public reasoning among equals; and for Fearon (1998) it is empirical nature of the process and the consequence it produces.

Gutmann and Thompson (2004:7) captured some of the most common themes in this debate in their conception of public deliberation as a form of governance in which “free and equal citizens (or their representatives) justify decisions in a process in which they give one another reasons that are mutually acceptable and generally accessible with the aim of reaching conclusion that is binding in the present on all citizens but open to challenge in future”.

This conception has an analytical (cognitive) and a social component to it. The analytical component includes judicious argument, critical listening and earnest decision making through building information base, problem analysis, criteria specification, evaluation of criteria and arriving at the optimal solution (Gastil 2000:12; Gastil, Black and Mascovitz 2008:26). The social component includes ensuring equal and adequate speaking opportunities to group members, demonstrating mutual comprehension of one another’s perspectives and respect for views other than one’s own (ibid).

In other words, if politics is about pursuit of collective choice, democracy is about reasoning for such choice; then deliberation is about the *kind* of reasons to be given, *sphere* in which they should be given and *to whom, by whom*; and *how it* should be given (adapted from Gutmann and Thompson 1996). In achieving this if basic liberty, basic opportunity and fair opportunity are the guiding principles for deliberation; then reciprocity, publicity and democratic accountability are the regulatory principles for the deliberative participation (Gutmann and Thompson 2004:133).

3.2.1 Reciprocity

Life cannot subsist in society but by reciprocal concessions
Samuel Johnson

Stigler (1981) observed ‘when self-interest and ethical values are in conflict, much of the time, most of the time self-interest ... will win’ (Cited in Fehr and Gächter 2000:1). However, experimental evidence suggests individuals are willing to consider common

interest in preference over their private interest if other members respond in a similar manner (Fehr and Gächter 2000; Sethi and Somanathan 2001; Sethi 2008; Ostrom and Walker 2003).

This sense of mutuality is reciprocity¹⁶, a capacity to seek fair terms in an exchange through social cooperation (Gutmann and Thompson 1996:52-94). Barry (1995) argued reciprocity promotes justice as it encourages fair exchange. Reasoning in a reciprocal exchange is both substantive and procedural (Gutmann and Thompson 2004:134). It combines normative morality with empirical facts, and altruistic¹⁷ rationality of impartiality with the self-seeking rationality of prudence, such that it is justifiable, agreeable and persuasive to all (Gutmann and Thompson 1996 p.52-94).

Such an exchange improves coordination and cooperation by offering reasons and finding reasons which are acceptable to others; and improves predictability in actions by promoting the trust that one's action will be matched by similar action (ibid; Sethi 2008, Buchan *et al* 2002). This improves similarity of motives and assortativity in the community. (Fehr and Gächter 2000:1; Sethi 2008). Reciprocity can be direct as $A \leftrightarrow B$ and indirect as in $A \rightarrow B \rightarrow C$ or $A \rightarrow B$, $B \rightarrow C$ and then $C \rightarrow A$ (Nowak and Sigmund 2005).

3.2.2 Publicity

Publicity is one of the purifying elements of politics
Woodrow Wilson

Publicity principle holds that the deliberative exchange should be conducted in a public sphere to realize: reciprocity, the independent value of 'openness' and the powerful effect of sanction (Gutmann and Thompson 1996:97). The public sphere is an institutionalised arena for political participation by the citizens, through discursive interactions, on matters of public concern (Habermas 1989, Fraser 1990). It is expected to bring in social integration

¹⁶ For similar views expressed by Cavell in his reflections on moral perfectionism and by Foucault in his *manifesting for another: Parrhesia*; see Norval (2011). Though several explanations have been offered for the incentive behind reciprocal behaviour, one intriguingly traces it to Darwinian natural selection and superior survival strategy (see Sethi 2008). For views similar to reciprocity see Sugden (2004) on morality of cooperation.

¹⁷ Economists argue that altruism is different from reciprocity in the sense it is unconditional (see Fehr and Gächter 2000:2)

through the power of solidarity and force of communication. This is achieved through parity in participation, being accessible to all, treating all the participants as peers, and according merit to arguments rather than to the identity of the person making it¹⁸ (Calhoun 1992:6, 28; Fraser 1990).

Supporting this is experimental evidence which suggests that face-to-face interaction is the single most important factor in increasing cooperation for collective effort as it communicates each other's intentions and links it to the broader interest; and greater the interaction greater the likelihood of cooperation emerging (Ostrom 1998; Bouas and Komorita 1996; see also Sally 1995; Bornstein 1992). In addition, public sphere by promoting publicity of rules and transparency in its application improves compliance through shared understanding (see Ostrom V 1996).

3.2.3 Democratic Accountability

Politics requires an adequately blameworthy agent
Judith Shklar

Democratic accountability is an ally of publicity (Gutmann and Thompson 1996:97). It is about accountability to what, why, to whom, by whom and what the criteria to assess the account are (March and Olsen 1995:142-67). Giving account is about explaining, interpreting and justifying of one's action, inactions and consequences of them in an accessible manner (Behn 2001: 4; Chambers 2003:308). The requirement to give an account as a social control, to all affected and bound by the collective choice, forms the conceptual core of legitimacy (March and Olsen 1995; Gutmann 1996; Chambers 2003:306-310).

Deliberative setting fosters capability to account by providing necessary incentives and constraints (March and Olsen 1995) to construct the account in an agreed currency of discourse, and by specifying what the criteria should be to assess it (Day and Klein 1987:2-10).

¹⁸ Habermas' conception of public sphere is criticised for not giving adequate attention to issues related to gender, religion, nationalism and social associations (see Calhoun 1992:33-41)

3.3 THE POLITICAL INSTITUTIONS OF PUBLIC DELIBERATION

Better mixed the polity is the more lasting it is
Aristotle

Political institutions of public deliberation facilitate the consensual construction of the collective choice, by shaping and constraining individual and collective behaviour (strategies) through structuring their exchange with a set of antecedent and procedural rules (Ostrom 2005, Sheplse 2009:24). These rules are regulatory, instructive, precept and principle in nature (see Ganz 1971).

The rules define the scope of the outcome; and then to achieve these outcome, they creates positions, assigns functions to these positions, assigns actors to perform these functions, provides information they need to perform these functions and specifies their behaviour in performance of these functions (Ostrom 2005:190, Sheplse 2009:24).

The rules can be formal, written down, exogenous and externally enforced; or informal, norms, endogenous and self-enforced (Rothstein 1996:146; Shepsle 2009:25, Almond and Coleman 1960:17). The norms are culturally derived and socially sanctioned values and conventions. They influence the way the formal rules are understood, implemented and modified (North 1990:36-46).

3.3.1 The Antecedent Rules of deliberative participation

These rules specify a set of conditions that needs to be satisfied before the deliberation commences in a collective action situation

1. Deliberative institutions are on-going and continue into the indefinite future (Cohen 1997:21-32); and the deliberation happens in a public sphere (Habermas 1989)
2. All citizens who are affected by the collective choice outcome have an equal right to participate in determining that collective outcome and are bound by their collective decision (Cohen 1997:21-32; Dahl 2006:4-30). Participants may be pluralistic (diverse) in their preferences, convictions, and ideals. While they share a commitment to the deliberative resolution of the collective choice, they are not necessarily bound to a

particular set of collective choice or may not be indifferent to their own good (Cohen 1997:21).

3. Participants recognise one another's capacity to deliberate as in public exchange of reasons, and deliberate accordingly (Cohen 1997:21)
4. Rules which frame and coordinate the deliberative exchange are manifest, in the sense; they are public and establish a clear connection between deliberation and the outcome (Cohen 1997:21-32). The participants share common knowledge about the existence, requirement and adherence to these rules, and that they are free to deliberate as equals within this framework of the rules (Cohen 1997:21-32).

3.3.2 The procedural Rules of deliberative participation

These rules specify procedures for proposing one's preferences, considering alternative preferences by others and then deciding on the collective preference.

1. All major preferences prevalent in the community should be represented in the deliberation (Fishkin 2009:33-42).
2. Every participant has an equal opportunity to propose preferences, deliberate on other's preferences and has an equal voice in the collective decision. The rules are equally applicable to all. Participants regard themselves as bound only by the deliberative outcome and its pre-conditions and are not constrained /weighed upon in their deliberation by authority, prior norms, affiliations and statuses in the society (Cohen 1997:21-32).
3. The participants have access to adequate information on the preferences being proposed or considered. The information should be relevant, accurate, factual and accessible (Fishkin 2009:34). Purpose being persons who do not have a preference for an issue can access the information to form a preference and engage in deliberation (Fishkin 2009: 33-42), and when participants are presented with multiple preferences an informed selection can be made (Manin 1987:356).
4. Participants give reasons for proposing, justifying and rejecting preferences with the full knowledge that outcome of a preference is decided by the force of better argument than by who or how many proposed it (Cohen 1997:21-32). Such a

reasoning, as the tool for bargaining and negotiating, need to address what are the benefits and costs related to a preference, how is it linked to the preference causally, how to value these costs and benefits and how these costs and benefits will be distributed (Fishkin 2009:33-42).

5. There needs to be a substantive balance, as in preferences proposed by one person/group/perspective are countervailed by another person/group/perspective. This gives the confidence that relevant aspects of the preference in question have been considered and 'weighed' (Fishkin 2009:33-42; Manin 1987:355). Participants need to be conscientious than strategic in weighing the merits of the preference (Fishkin 2009:33-42).
6. To make all the participants feel included in the deliberation, modes of communication can include greetings as in public acknowledgment of participants, rhetoric speech which aims to connect with the others through emotions, rational speech which uses reason in a sequential logic, and narrative speech such as testimonials which allow sharing of experiences and values thereby create a sense of similarity (Young 2000:52-77).
7. Participants arrive at a rationally motivated consensus, which is persuasive to all. In the context of failure to achieve such a consensus, then the participants may decide to vote on the preferences with some form of rule to decide on the majority (Cohen 1997:21-32). Cohen (ibid) argues deliberation-based aggregation, motivated by a commitment to find common preference persuasive to all, can be quite different from a non-deliberative based aggregation. Manin (1987:359) also similarly argues, though the aggregation may not conform to all views, it is the resultant of confrontation between them.

3.4 THE OUTCOMES OF THE DELIBERATIVE PARTICIPATION:

Cooperation is not a sentiment – it is an economic necessity
Charles Steinmetz

Depending on the extent to which the rules for the deliberations are met, the following outcomes can be expected from the deliberative participation.

- Since the time Aristotle termed man (sic) as a political animal, the notion that political participation has a beneficial effect on individual participant has been a central tenet of the democratic theories. Almond and Verba (1965:145) observed, political participation at the local level plays a major role in the development of a competent citizenry. They explained political participation serves as a training ground for democratic skills and may foster a sense of competence among participants. Pateman (1970:41-50) in her seminal work *Participation and Democratic Theory* builds on this, by persuasively arguing that the output of participation includes not just policies but also improved psychological, social and political capabilities of the individual participants. In support of this she draws on the classical works and explains, these capabilities, for Mills, was an active character; for Cole, non-servile character; for Schumpeter, national character; for Berelson, consensual approach and tolerance to other opinions; and for Dahl, social training and equality.
- Engaging in deliberation in a public sphere, in a reciprocal and accountable manner, promotes public spiritedness through civic integrity and civic management (Gutmann and Thompson 1996). Civic integrity is about consistency in speech, action and principle about an issue. Civic management is about acknowledging, accepting and economizing on disagreements in speech and action on opposing views about that issue (ibid). This improves moral and intellectual qualities of the deliberants (Gambetta 1988).
- The requirement to give justifiable reasons in public and be accountable for it acts as a deterrent to narrow self-interested preferences and promotes broader-interest preferences which are of greater common good to the community (Cohen 1997:21-32; Gutmann and Thompson 1996:55). Such decisions can be Pareto-superior and may contribute to distributive justice in the allocation of the public goods (Fearon 1988).
- The requirement to give factual and accessible information on a preference and the reasons to propose it / justify it / reject it, in public; reveals private information, improves information structure, makes information as a common knowledge and reduces boundedness of rationality (Fearon 1988; Manin 1987, Cohen 1997:21-32). This by transforming irrational beliefs in the information structure to more fact-based

beliefs reduces conflicting and non-coherent preferences both within an individual and among individuals (see Manin 1987) leading to homogeneity.

- In a collective choice situation, talk serves the purpose of 'signalling' one's preference, a private information, to the others. However, it is difficult to link talk to the outcome, the payoff, due to a multiplicity of individuals and preferences; and talk is not costly as compared to other means for signalling. This incentivises individuals to talk in a strategic manner without revealing their actual preference and hoping to influence other's preference to their advantage. As others also know that talk may not reveal actual preference of the talker, more often than not, in political settings exchange results in nothing more than 'cheap talk' with low credibility (see Austen-Smith 1990, 1992; Farrell and Robin 1996). In a deliberative setting, the requirement of information to be factual, reasons to be justified in public and be held accountable makes the link between talk and outcome clearer; and the repetitive nature of the setting makes talk costly and hence commitment to it more credible (See Ban *et al* 2012 for empirical evidence).
- The reasoned deliberation reduces dilemmas in discretionary action by focussing, on reliability, adequateness and timeliness of an action on one hand, and on the other, by focussing on values linking means with the ends (Anderson 1990, cited in March and Olsen 1995). By being a part of the collective, informed consent for the common choice increases the motivations to credibly to commit to that choice (Fishkin 2009:34).
- The sense of inclusiveness, equality, respect for opposing views and assortativity improves civic friendship, the similarity of motives (Cohen 1997:21-32) and sense of community identity (Burkhalter, Gastil and Kelshaw, 2002).
- Giving reasons, considering reasons and deciding based on them; and clarity in connection between one's action and outcome due to publicity; improves individuals' perception of their civic communication skills, sense of self-efficacy, political knowledge and competence, their sense of justice on one hand, and on the other, faith in the system and respect and allegiance to the rules (Cohen 1997:21-32; Burkhalter, Gastil and Kelshaw, 2002).

- The repetitive nature of the deliberative meetings combined with reciprocity promotes assortative, predictable and adaptive behaviour among the participants to be able to know about each other's motives, expectation and preferences in a coordinated way to arrive at cooperative strategies (see Hardin 1982:156-170; Sethi 2001, 2008; Fehr and Gächter 2000). This transforms 'opportunists' into 'reciprocals' as cooperation is perceived as rational as in self-interest, thereby approximating the individual rationality with the collective rationality necessary for collective action (Sethi 2008). Susskind (1999, cited Dryzek 2007:248) in her empirical study finds that mediation, consensus building approach and cooperative search for an outcome that can be persuasive to all; can make the collective choice more tractable. Ostrom (1998:3) citing empirical evidence argues reciprocity, trust and reputation build on each other, and can together successfully overcome the temptations of short-run self-interest as in free riding in collective action.

For a brief review of some of the key empirical literature on the beneficial effect of deliberation in the context of developing countries please see Appendix A.2. For a detailed review see also Mansuri and Rao (2013).

3.5 THE LIMITATIONS OF THE DELIBERATIVE PARTICIPATION

Whoever starts shouting ... with the greatest self-assurance and shouts first, is right
Lev Tolstoy

Since the days of its origin in the Athenian democracy to the present day online discussion forums; deliberation has drawn supporters and detractors all along. While in Athens, the debate was whether it really improved decisions or is it just sophistry and demagoguery (Elster 1998:2), whereas in the present day, the debate is about freedom of expression versus intrusion into the private sphere.

The criticism on deliberation in political participation have ranged from too much emphasis, to too wide an agenda which leaves little space for private beliefs, to diminishing civil liberty to questioning the centrality of deliberation in democratic politics, to too elitist, to incomplete theorization (see Macedo 1999). Dryzek (2007) though admits that much needs to be done on the fronts of theory and practice of deliberation in politics;

nonetheless feels much of the criticisms are based either on no facts at all or on stylized facts or bad facts. From the perspective of this research three important reasons for a pragmatic expectation from the deliberative participation are difficulty in achieving ideal deliberation setting, its possible polarizing effect and its optimality.

Fishkin (1995) concedes that deliberative settings may not meet all the ideal requirements; and calls for tolerance in expectations from it, and a greater focus on the degree of deliberation that can be achieved in a debate. Similarly, Page (1996) feels, in the mass modern democracy as against city states of ancient Greece, face-to-face deliberation though ideal is not practical and need to involve representatives and professional communicators. Gutmann and Thompson (1996) accepts that in certain deliberative contexts it may not be possible to reach consensus; however, such disagreements would be mutually accepted and respected as they are resultant of confrontation between opposing views.

Sunstein¹⁹ (2002) questioning the practicality of ideal deliberation; persuasively argues that iterated deliberation in public sphere may lead to polarization of opinion within the group, due to influences of social behaviour such as reputation, discursive capability and limited argument pools within the group. He feels affective factors, common identity and solidarity promote polarization and heterogeneity in the form of opposing subgroups can alleviate it²⁰. In his opinion, the solution lies in the availability of full information, creating space for enclave deliberation for suppressed views to emerge and appropriate institutional design which promotes plurality in participation and views.

Stokes (1998) and Przeworski (1998) raise similar concerns on polarization in the context of inequalities in collective choice situations. Mendelberg (2002) in her review of empirical literature on small group deliberation reports, Individual who holds more than the average number of arguments, those who are perceived as experts on the subject matter, those

¹⁹ See Carpini, Cook and Jacobs (2004:325) for similar views

²⁰ Shapiro (2002) argues that deliberation can also possibly widen the divisions through Marxist 'consciousness-raising' effect.

with higher socio-economic endowments; and a group which has cultural similarity show a higher propensity to deliberate.

Shapiro (2002) likening deliberation to collective fiddling when Rome was burning, argues that it has significant costs in terms of procrastination, stalling, waste of time, indecision and unfair control of agenda and hence questions its optimality. He argues that if collective action is about pursuing superordinate interests when there is a conflict of interests involved in that pursuit, costs of Hirschmanesque exit are unequal and interest at stake is 'basic'; then deliberation is useful to the extent it strengthens the voice of the disadvantaged. He further argues that the desire to deliberate is an individual commitment and differs from bargaining by requiring solicitousness, creative ingenuity and desire to find the right answer. He concludes by observing, ability to achieve these depends on the design of deliberative institutions which can incentivize this desire.

Young (2000:52-77) explains exclusion in political participation can happen in two ways, external and internal. External exclusion happens when those with better social and economic resources influence the institutional design in such a way that certain section of the community with poorer resources are purposefully left out. However, more insidious and hence difficult to address is internal exclusion. In this form even if the sections of the community with poorer resources are formally included in the participation, they may be left out of the deliberations in a substantive sense through a set of prejudicial norms such as one which encourage a discursive rational communication or one which prioritises issues which are important only to those with better resources

However, Grimes (2008) and Fishkin and Luskin (2005) citing empirical evidence argue that though deliberative setting may have degrees of imperfections and incompleteness; ordinary people do benefit from deliberating, the process neither biases nor polarizes their opinions and on the contrary has the potential to generate civic goods.

There are profound differences in the way different deliberative initiatives are conceived (Guttman 2007:417) and it is necessary not to hold deliberative processes to absolute levels of perfection (see Fung 2007). The need is to recognise talk-centric deliberative

democracy as an expansion of the vote-centric democracy, and that, the ultimate aim of deliberation; more than achieving consensus, is the creation of an expectation that pursuing of ones' interest will be within the overarching interest of the community (Chambers 2003). This presupposition can have a steering effect on the course of the debate (Habermas 1996:540, cited Elster 1998:12)

3.6 THE PROPOSITIONS

The previous chapter discussed participatory institutions can facilitate collective action required to achieve correspondence between preference and provision of local public health goods. However, in the context, of variations in levels and distribution among participants, of the level of information, political efficacy and sense of community; or their inability to credibly commit, the performance of these institutions can be sub-optimal and collective action may not sustain.

This chapter has attempted to show repetitive deliberative participation can foster among participants: information as a common knowledge; discursive and communication skills; self-efficacy, political knowledge and political competence; similarity of motives, civic friendship and solidarity; predictable and adaptive behaviour; coordinated strategies and cooperative goals; public spiritedness through civic integrity and civic management; transparency, accountability and credibility of talk being linked to outcome in exchanges; and sense of justice and common good preferences as against self-seeking preferences in arriving at the collective choice.

Based on this, the research makes the following propositions to answer the question posed in chapter one: *whether and how better participation in deliberative meetings of the Panchayats is associated with better provision of basic water and sanitation services.*

First, it proposes that; **better deliberative participation is associated with better provision of basic water and sanitation services by the Panchayats**

Then to explain the possible mechanism behind this association, it further proposes:

At the individual participant level:

1. **Better deliberative participation is associated with the better level of information structure on local public health goods;**
2. **Better deliberative participation is associated with, better internal political efficacy and better external political efficacy;**
3. **Better deliberative participation is associated with better 'sense of community'.**

At the Panchayat level:

4. **Better deliberative participation is associated with better rule of law in operations of the Panchayat**

CHAPTER 4: GATHERING DATA TO TEST THE PROPOSITIONS

The previous chapter proposed better deliberative participation in Panchayat meetings is associated with better provision of basic water and sanitation services by the Panchayats. Then to explain the possible mechanisms behind this association, it further proposed, individuals who participate more are associated with higher levels of information, political efficacy and sense of community; and Panchayats having better participation in their deliberative meetings are associated with higher levels of rule of law in their operations.

To test these propositions a cross-sectional field survey was conducted in the southern state of Karnataka. Using a three staged systematic sampling method, 99 Panchayats (73 complete cases) and within these Panchayats: 396 individuals (373 complete cases) and 99 villages were sampled. Well-developed structured questionnaires in Kannada, the local language, were used for collection of data. A bilingual database in MS Access® was designed for data inputting. The statistical software Stata v.13® was used for data analysis. The factor analysis was used to measure the composite variables in the propositions, and multivariate regression analysis to test the propositions.

This chapter is structured as follows. The first section describes the philosophical assumptions underpinning the approach to testing the propositions. The second section describes the survey setting and the sampling strategy. The third section explains the questionnaire development process, and the steps taken to enhance data quality. The Fourth section concludes with a discussion on approach to statistical analyses of the data.

4.1 AN APPROACH TO TEST THE PROPOSITIONS

The research problem is a state of affair that needs additional understanding. The understanding can be gained through valid descriptive and explanatory inferences about the state of affair (King, Koehane and Verba 1994). The research inquiry is a purposive accumulation of knowledge to gain such an understanding (Lincoln and Guba 1985). The enquiry can examine the state of affair per se, what explains it and what are its implications (Vaus 2014:9-19). The nature of the enquiry and hence its outcome depends

on the ex-ante philosophical orientation (assumption/paradigm) about the broader world (Creswell 2014:5-20).

In the present context, the research problem is the state of affair of inadequate provision of local public health goods. Given that there is a fair understanding of the state of affair and its implications; the purpose of the enquiry was to find out what explains this state of affair. This research used post-positivist orientation; which is deterministic, in its need to identify and assess variables which can explain the state of affair; deductive, in using the analytical (in the second chapter), theoretical and empirical perspectives (in the third chapter) to derive a possible set of variables from the existing knowledge base; reductionist, in suggesting a subset of variables as propositions; and empirical, in gathering observed data on these variables to statistically test the propositions (Vaus 2014:9-19; Creswell 2014:5-20).

In this research setting, as discussed in the first chapter, the variables exhibit contextual variations. This requires examination of the variations under as many different contexts as possible to have a robust inference on the relationship between the variables. Drawing such a valid inference necessitates having good descriptive data on the variables (see Vaus 2014:9-19). Non-availability of the secondary data on these variables made the field survey the preferred strategy of inquiry for gathering the required primary data.

If data are elements of information (King, Koehane and Verba 1994:23), then the survey is a strategy to systematically collect, organise and analyse the data in a structured manner (Vaus 2014:3-9). The surveys are efficient and versatile, as a large number of variables can be measured in a large number of case across different contexts with relatively less cost and time (Schutt 2012: Ch.8; Vaus 2014:5). The surveys also allow comparison across units of analysis and across contexts to draw robust inferences (ibid). The surveys have been extensively used in researching Panchayats in diverse contexts to study equally diverse research problems (for instance see Heller *et al* 2007; Besley *et al* 2005; Alsop *et al* 2001; Raabe *et al* 2009; Widmalm 2005).

The design of the survey strategy depends on whether the enquiry aims to examine the associative or causal relationship among the variables. The testing for causality is most well-suited to mature topics where the research approach seeks to match the underlying assumptions of the scientific observations, and the challenge is not to uncover the unknown but to obtain the known (Kuhn 1970).

This research setting is characterised by paucity of previous studies, difficulty in accessing data for the previous years required for a difference-in-difference approach, impracticality of the experimental design; and the resource constraints including time. Hence, the primary intent of this research was to examine for an associative relationship in propositions using a cross-sectional (correlational) survey design (see Vaus 2014:34).

4.2 THE SURVEY SETTING AND THE SAMPLING STRATEGY

The State of Karnataka located in southern part of India was chosen as the site for field survey (see Figure 4.1). Karnataka is the seventh largest among the states by area; and the eighth most populous with an estimated population of 61 million as per 2011 census.

The rationale for choosing Karnataka State is, it is considered as a pioneer in local governance with its decentralization efforts tracing back to 19th Century. It perhaps is the first State to make an attempt to institute three tiers of PRI, way back in 1902 (Rao 2004: 46, 2007; Meenakshisundaram 2005). The Panchayat act passed by the State subsequent to the Ashok Mehta Committee report is widely regarded to have provided the model for the 1992 Act (ibid). Following the directives of the 1992 Act, Karnataka was among the first few States to legislate Panchayat Raj Act in 1993 (henceforth 1993; Act GOK 1993) for the creation of PRIs and transfer all the public good functions as specified in the 1992 Act to the PRIs (Aziz 2007).

Karnataka is also the home state of the researcher. The researcher has more than 10 years of experience of working at the grass root level in the development sector in this State. This experience has given proficiency in the local language, the Kannada; an intimate knowledge of socio-cultural traditions; and access to networks of development

professionals, bureaucrats and elected representatives at both Panchayat and at the State level. These have greatly helped in making the field survey feasible.

The Sampling Strategy

Given the rural context of this research, collection of data involved visits to the Panchayats and face to face interview with the individuals in the Panchayats. Within the available resources, it was feasible to visit about one hundred Panchayats.

Sampling strategy is a trade-off between cost and precision of the estimates (Grooves, Fowler, Couper *et al* 2009). Though it is ideal to choose a sampling strategy in which all the Panchayats in the State have an equal, non-zero and known probability of being sampled (EPSEM, the equal probability of selection method; see Kish 1965), the higher resources in terms of cost and time made this option non-feasible. Also, as the intention was to test for associations under as many different contexts as possible, EPSEM may not ensure this. So, this research used a three staged systematic approach with districts as Primary sampling units (PSU), blocks as secondary sampling units (SSU) and Panchayats as tertiary sampling units (TSU).

Implications of this approach are three. First, is the deviation from the assumption of EPSEM that the observations are independent and identically distributed; and hence the need to correct for this design effect in the analysis. Second, the possible homogeneity (higher intra-class correlation) of Panchayats within primary and secondary sampling units may increase the sampling variance of the estimates. One way to reduce the homogeneity is to increase the variability among the sampled units in each stage and to increase the number of units sampled at the primary and secondary level (Grooves *et al* 2009). Third, is the validity of the results (*ibid*). The primary intent of this research was to establish the internal validity of the results within the sample which has been studied. As external validity, the generalizability of the result from the sample to the unstudied sections of the universe (population) is a function of the representativeness of the sample of the universe and the size of the sample (Gerring 2012: 84-90).

To improve variability in sampled Panchayats, the research chose the performance rankings of the Panchayats provided by the Government of Karnataka as the basis of the sampling strategy, as other forms of data to differentiate all the Panchayats on a common basis across the state were not present. The Government is ranking all the districts and blocks based on the performance of their Panchayats, on an ongoing basis (RDPR 2014b). The six criteria used by the Government to assess the performance are:

1. Completion of balance sheet for the current year
2. Completion of the balance sheet for the previous year
3. Collection of house tax greater than 60% of the total amount due
4. Number of application received by the Panchayat under Guaranteed Services to Citizen Act is more than 75% of the average for the state
5. More than 95% of above applications were addressed within the allotted time and
6. Panchayat has conducted Samanya Sabha meeting in the previous month and has uploaded the minutes of the meeting to the website.

To arrive at the ranking, the government equally weighted all the six criteria and then their scores are linearly aggregated for a Panchayat, and then at the block and district level (RDPR 2014b). The research first sampled 11 of the 30 districts, and then sampled three blocks within each sampled districts and finally sampled three Panchayats within each sampled blocks, to arrive at an overall sample of 99 Panchayats. See Figure 4.2 for a schematic representation of the sampling strategy.

First stage: Districts as primary sampling units (PSU),

The sampling frame had all the 30 districts of the Karnataka State and the sampling fraction was (30/11). The districts were arranged in the ascending order of the ranks. The number 3 was randomly chosen from numbers 1, 2 and 3; and every third district was systematically sampled starting from the 3rd district. The 10th district sampled was the last in the list. The process was repeated, with number 1 randomly chosen between numbers 1 and 2; and the first district in the list was sampled for the 11th district (see Grooves *et al* 2009).

Second stage: Blocks as secondary sampling unit (SSU)

The sampling frame was the total number of blocks within each sampled district. In each of the sampled districts the blocks were arranged in the ascending order of their ranks. To promote the variability in the sampled units; the top, median and the bottom blocks in the sampling frame were sampled to arrive at 33 sampled blocks.

Third stage: Panchayats as tertiary sampling units (TSU)

The sampling frame was the total number of Panchayats within each sampled block. Ranks at the level of individual Panchayats were not available. The Panchayats were arranged in the ascending order of their population density and the top, median and the bottom Panchayats were sampled to arrive at 99 sampled Panchayats.

Sampling of Grama Sabha and Samanya Sabha meetings in the Panchayat

The activities of the Panchayats are planned and carried out on the financial year basis, which extends from 1st April of the present year to 31st March of the next year. The field survey was started in July 2013. So to get the information on a full year, the financial year 2012-13 (April 1st 2012 to March 31st, 2013) was chosen.

Grama Sabha meetings are typically convened once in six months and the research sampled both the meetings. In the event where more than two Grama Sabhas were held; the first and the last were sampled. The Samanya Sabha meetings are typically convened once a month. The first and the last meetings of the year are important, and hence they were sampled. The first meeting involves the formulation of the programme plan and the budget for the year, and the last meeting involves finalisation of the programmes, and the income and expenditure for the year.

Sampling of village in the Panchayat

The villages under the jurisdiction of the Panchayat vary in number, population and socio-economic development. Hence to control for unobserved variables and to reduce the cost and time in traveling, the Panchayat headquarter village was sampled in each of the sampled Panchayat to arrive at a sample of 99 villages. In each village, four blocks were randomly sampled using the lottery method. If the village had less than four blocks, then all the blocks were sampled

Sampling individuals within the Panchayats

Sampling key individuals to analyse complex institutional arrangements is a well-established method (Heller *et al* 2007:630; Evans & Rauch 1999:754). Four key individuals (common citizen, elected member, president and chief bureaucrat) having a principal-agent relationship with each other in Grama Sabha and Samanya Sabha meetings were sampled. The principal-agent theory informs that such a relationship is characterised by inherent asymmetries; for instance in the level of information structure (see Sections 6.1 and 9.1 for a detailed discussion). This strategy helps to improve variability among the sampled individuals and hence to reduce intra-class correlation.

These individuals were sampled in the following manner:

One citizen and one elected member who had participated in the last held Grama Sabha meeting were sampled. To sample the citizen the list of participants was obtained from the Panchayat office. Participants' names were arranged in alphabetical order. Then the first person in the list who was from the Panchayat headquarter village was sampled. To sample the elected member, using the same list, the first person who was elected from a ward located in the Panchayat headquarter village was sampled. In the event of such a list not being available, the Grama Sabha meeting previous to the last held was chosen. If the person sampled was not available, then the next eligible person on the list was chosen.

In Samanya Sabha meetings, the President and the Panchayat Development Officer (PDO) were sampled. In the event of non-availability of President, the vice-President was sampled. In the absence of PDO, the secretary of the Panchayat was sampled and in instances where both were present, the PDO was sampled.

4.3 DEVELOPING QUESTIONNAIRES AND GATHERING DATA

Informed by the literature reviewed, discussions had with the local experts on Panchayats (which included academics, Government officials and civil society practitioners), the exploratory field visits, and the discussion had with local citizens and Panchayat officials during these visits; a comprehensive structured questionnaire was developed. The questionnaire was initially developed in English and then was translated to local language

Kannada by the researcher. After this, it was back-translated into English by a qualified translator. Two versions were checked for consistency and appropriate changes were made where necessary to finalise the questionnaire.

This questionnaire has been reviewed by, and has received ethics clearance from; (1)University of Oxford Central University Research Ethics committee (CUREC) vide number: SSD/CUREC1A/13-157; 18 June 2013 and (2) Public Health Foundation of India (PHFI) Institutional Ethics Committee (IEC) vide number TRC-IEC 175/13; 24 May 2013. The department of Rural Development and Panchayat Raj, Government of Karnataka, has permitted this research to collect the data on Panchayat activities; vide letter no: gra.a.pa 43 taa.pa.sa 2013.

This questionnaire had three sub-questionnaires:

1. The Panchayat questionnaire collected data at the Panchayat level by extracting them from the records and documents maintained at the Panchayat office; on:
 - a. Socio-economic-political profile of the Panchayat (Section one in the questionnaire) ²¹
 - b. Grama Sabha and Samanya Sabha meetings (Section two in the questionnaire)
 - c. Variables used to measure rule of law (Section three in the questionnaire)
2. The individual questionnaire collected data at the individual level through face to face interview; on:
 - a. Socio-economic profile of the individuals (Sections one and eight in the questionnaire)
 - b. Variables used to measure their participation in Panchayat meetings and the quality of deliberation in those meetings (Section three in the questionnaire); and
 - c. Variables used to measure their level of information (Sections four and five), political efficacy (Section six) and sense of community (Section seven).

²¹ For some of the variables in this category, the data were obtained from the Ministry of Rural Development and Panchayat Raj, Government of Karnataka; which was based on 2001 census (see Table 5.4).

3. The village questionnaire collected data at the village level through mapping; on
 - a. Availability of water and sanitation facilities and
 - b. State of maintenance of these facilities

Piloting the questionnaires

The questionnaires so developed were piloted in three Panchayats in Karnataka state. Purpose was to check for sufficient variation in responses, clarity in the wording of questions so that its meaning is clearly understood, adequateness of options for selection under each question, redundancy of questions, potential non-response to questions, evidence for acquiescence, flow of questions, effect of order of different subsections in a questionnaire on the response, simplicity of skip arrangements and the total time taken for administering the questionnaire. After each piloting, debriefing sessions were held with the research team. The feedback from the piloting sessions was appropriately incorporated to arrive at the final questionnaire; which is presented in Appendix A.3.

4.3.1 Steps Taken to Improve the Quality of the Data

To improve the quality of the data, several steps were taken both before the commencement of the survey and during the survey.

Selection and training of research assistants

Six research assistants were recruited for conducting the field survey through a personal interview conducted by the researcher. All the assistants were residents of Karnataka State and were proficient in local language Kannada. All had graduate level education and had extensive experience in conducting surveys in rural parts, especially in areas related, to water and sanitation and the Panchayats.

In addition, one field supervisor was also recruited to coordinate, guide and monitor the work of the assistants. The supervisor had extensive field experience and was a consultant to the State Government on matters related to rural development and the Panchayats.

The assistants were adequately briefed on the purpose of this research. They were trained intensively for two weeks, by the researcher and the supervisor, on interviewing skills such

as building rapport, being objective, being neutral, making sure that respondent understood the question; and on cross checking the answers for internal consistency.

All the questions in all the questionnaires were discussed so that everyone had a common understanding of them. Several mock interviews were conducted among assistants and appropriate guidance was given where necessary.

During the actual survey

At the end of each day of the survey, the field supervisor would screen all the filled-up questionnaires for completeness, proper handling of skip questions and missing data; and appropriate measures were taken to address the shortcomings if any. To avoid interviewer bias, the interviewers were constantly rotated in administering the different questionnaires. In the case of the collection of Panchayat data which were extracted from records and village level data which were collected through mapping, random checks were made by the field supervisor to verify the reliability of the collection. In the case of the individual and the household data, all the interviews were audio-recorded and were checked randomly with the filled up questionnaire for correctness.

4.3.2 Data Entry and Data Screening

The questionnaires were in local language and the data were hierarchical in nature. The researcher purpose built a bi-lingual (Kannada-English) database in the relational database management (RDBMS) software MS Access 2010® for data inputting. Then to minimise data entry errors, variable level validation rules and relationship pattern for hierarchical data were established. Double data entry was done and then a cell-by-cell comparison of the two versions data sets was made to arrive at the matched final three data sets Panchayat, Individual and village. All the four data sets were migrated to Stata v.13® for analysis, using Stat/Transfer v.12®.

A variety of techniques was used to screen the data for errors and inconsistencies. At the level of questionnaires, the data were checked for completeness of the entry, consistency in hierarchical relationships and internal consistency between the questions. At the level of variables range checks, ratio checks, balance checks, comparison to other data sets

where available, and uniformity in measurement scales were checked. Ordinal variables were checked for uniformity in the progression of values in coding. The missing data were coded as follows; .a: not applicable; .i: no information; .r: no response and .k: don't know.

4.4 THE STATISTICAL ANALYSES OF THE DATA

This section briefly discusses the four key aspects related to the statistical analyses used in this research:

4.4.1 Strategy to Handle Missing Data

The missing values or item non-response are common in survey data, as the data may not be available or the respondents may reserve their right to not to respond (Greene 2012: 134-37). As to what amounts to significantly missing, the value varies in literature from a low of 5% (Tabachnick and Fidell 2013:97) to a high of 15% (Hertel 1976). More than the quantity of missing data, the pattern of missing data with respect to a single variable or a set of variables or a set of observations is more important (Tabachnick and Fidell 2013:97).

Data can be missing, completely at random when they are not predictable by any of the variables in the model; at random when they can be predicted by other variables in the model and not at random when it is related to the variable itself (Tabachnick and Fidell 2013:97; Greene 2012:134-37).

If the data are missing completely at random or at random, then one can employ pair-wise or list-wise deletion of the data. The implications are if the analysis involves several estimates, pair-wise deletion results in different samples for different estimates making comparison difficult. List-wise deletion of observations with missing values leads to a reduction in sample size and hence increases the standard error of the estimates and hence sampling variance (ibid). However, Allison (2002:85-87) argues, in list-wise deletion "standard errors should be decent estimates of the true standard errors". If the data are not missing at random, then list-wise deletion may introduce bias in the results.

One option is to impute missing values using an appropriate statistical technique. According to Allison (2002:85-87), statistical methods for imputing data introduce bias into

the standard error estimates and hence estimates of parameters. So he concludes by advising “list-wise deletion is generally a safer approach” (ibid). Greene (2012:137) similarly argues that in regression analysis imputing for missing values can lead to biases in the estimator which are difficult to quantify and imputation can be beneficial only if the proportion of imputed values is very small. Wooldridge (2013:324) in his discussion on handling missing data in regression analysis also similarly recommends “just ignore the observations that have missing information”.

Informed by this discussion, and given the primary intent of this research is to establish the internal validity of the propositions; this research considered only complete cases for analysis. The implication of this decision on results will be discussed in the section on the limitation of the research in the concluding chapter (Section 11.4).

In the Panchayat data set out of 99 sampled observations, 26 had missing values. In the individual data set out of 396 sampled observations, 23 had missing values. In village data set, though missing values were not present, only 73 observations which corresponded to the complete cases in Panchayat data set were considered for analysis. Table 4.1 provides the total observations sampled and the total number of complete cases considered for analysis.

4.4.2 Strategy to Handle Outliers

An outlier is a case with an extreme value of a variable (a univariate outlier) or a strange combination of values on two or more variables (multivariate outlier), such that it may distort statistics (Tabachnick and Fidell 2013:106).

For dichotomous variables with a split of greater than 90/10; those on the smaller side were considered as outliers (ibid: 107).

For continuous variables, a combination of numerical and graphical methods was used to detect outliers. Under the numerical method, values with a z score $\geq |3.29|$ ($p < 0.001$, two-tailed test) were treated as outliers (ibid). Under graphical methods, histogram, box plots

and probability plots (p-p plots to detect a deviation in the middle of the distribution and q-q plots to detect a deviation in the ends of the distribution) were used.

After detection, these values were treated as real values as data had been screened for errors during inputting. To approximate the distribution to that of normal distribution log transformation of the concerned variable was tried. If the log transformation did not improve normality; then the variable in its raw form was used and results were checked for sensitivity to this value. This research did not consider deletion of outliers as deletion led to a new crop of outliers (see Greene 2012:142).

4.4.3 Levels of Analyses

This research made five propositions (see Section 3.6). Out of these, three propositions, which examine the association of deliberative participation by the individual with their (1) Level of information, (2) Political efficacy, and (3) Sense of community, were tested at the individual level using individual data. Chapters Six (level of information), Seven (political efficacy) and Eight (sense of community) describes and discusses the results of testing of these propositions.

The remaining two propositions which examined the association of, deliberative participation with (4) Rule of law and (5) Provision of basic water and sanitation services, were tested at the Panchayat level using Panchayat level and village level data. Chapters Nine (rule of law) and Ten (water and sanitation services) describes and discusses the results of testing of these propositions.

4.4.4 Statistical Techniques Used for Analyses of data

This research used factor analysis to measure composite variables²² and multivariate regression analysis to test the propositions.

Factor analysis

The constructs used in the propositions are complex, multi-dimensional and typically latent in nature, requiring a set of observed indicators for their measurement. Factor analysis is a

²² This research uses composite measure, index, composite indicator, composite scale synonymously

technique used to reduce the dimensionality of the constructs into a smaller set of factors/components, by linear combinations of their indicators based on their correlational pattern (Tabachnick and Fidell 2013:660; Bartholomew 2011:1-3). This can facilitate their inclusion in the regression models for testing the propositions (Tabachnick and Fidell: 703). For algorithm used in conducting factor analysis please see Appendix A.4.

The constructs were measured using either formative or reflective models depending on the assumptions about the construct, direction of causality between the indicators and the construct, and the interchangeability of indicators (Bollen and Lennox 1991; Edwards and Bogozzi 2000; Jarvis, Mackenzie and Podsakoff 2003).

In a reflective model, the construct is theoretically derived, causality flows from the construct to the observed indicators (effect), the indicators are internally consistent and are interchangeable; and the assumptions conform to that of principal factor model of factor analysis (ibid; see also Tabachnick and Fidell 662-63; Bartholomew 2011:213-15). In formative models, the construct may not be theoretically derived, the causality flow from the observed indicators (cause) to the constructs, the indicators may not be internally consistent and are not interchangeable; and the assumptions conform to that of a principal component model of factor analysis (ibid).

Typical examples for reflective models are depression/anxiety/attitude measures, and for formative models are socio-economic indicators/Human Development Index (HDI).

For reflectively measured composite variables, reliability was assessed using internal consistency measures such as Cronbach's alpha, and their validity was established through construct validity or through previous research.

There is considerable debate in the literature about the relevance of conventional measures of validity to formatively measured composites (Edwards 2011; Diamantopoulos, Riefler and Roth 2008); with some arguing that validity is not relevant (Rossiter 2002:315). However, following Diamantopoulos *et al* (2001, 2008) and Bollen and Lennox (1991), this research used both construct validity and statistical methods to establish their validity

through three steps: content specification through definition, followed by indicator specification which covers all the dimensions in the definition, and finally assessing the strength of correlation between these indicators and the components in the principal component analysis.

Multivariate regression analysis

This research used multivariate regression analysis for testing the propositions. For interpreting the statistical significance of the regression coefficients, a p -value of ≤ 0.05 was considered. The research used the following diagnostic measures to check the validity of the assumptions of the model, and the sensitivity of the results to influential observations (Field 2013:304-12; Fox 1991):

1. To check the assumption of multivariate normality between the dependent variable (DV) and the independent variables (IVs), the normality of the residual was checked using both graphical methods (Histogram, probability plots and symmetric plots) and numerical methods (Shapiro-Wilk's test, and Skewness and Kurtosis test)
2. To check the assumption of linear relationship between the DV and the IVs; graphical methods such as scatter plots, augmented component and residual (ACPR) plots, and numerical methods such as Ramsey's Regression Equation Specification Error Test (RESET) were used
3. To check for homoscedasticity in the variance of DV and hence that of residual, for all values of a given IV; graphical methods such as residual vs. fitted plot, observed vs. fitted plot and residual vs. individual IV, and numerical methods such as white's test were used.
4. To check the assumption that IVs are orthogonal (non-collinear) to each other, Variance Inflation Factor (VIF) with a cutoff value of less than 10 (equivalent to R^2 of 0.90) was used (Kennedy 2008:199)
5. Influential observations were identified using the methods given below
 - a. Unusual value of DV (outlier) for given values on its IVs: detected through residual vs. fitted plots, and studentized residual $\geq |1.96|$

- b. The unusual value of IV (leverage) for given value on its DV: detected through leverage vs. squared residual plot, and leverage score $> ((2k+2)/n)$; where K is the number of IVs in the model and n is the number of observations.
 - c. Multivariate outliers, a combination of outliers and leverage: detected through Cooks distance $>(4/n)$ and DFFIT scores $>2*\sqrt{k/n}$
 - d. Large impact of an observation on the coefficient of a variable: detected through DFBeta scores $> (2/(\sqrt{n}))$
6. Results were checked for sensitivity to the clustering effect at the district level

Table 4.1: Number of Observations Sampled: Total and Complete

Dataset	Total observations	Complete observations
Panchayat data	99	73
Individual data	396	373
Village data	99	73

Figure 4.1: Map of Karnataka State

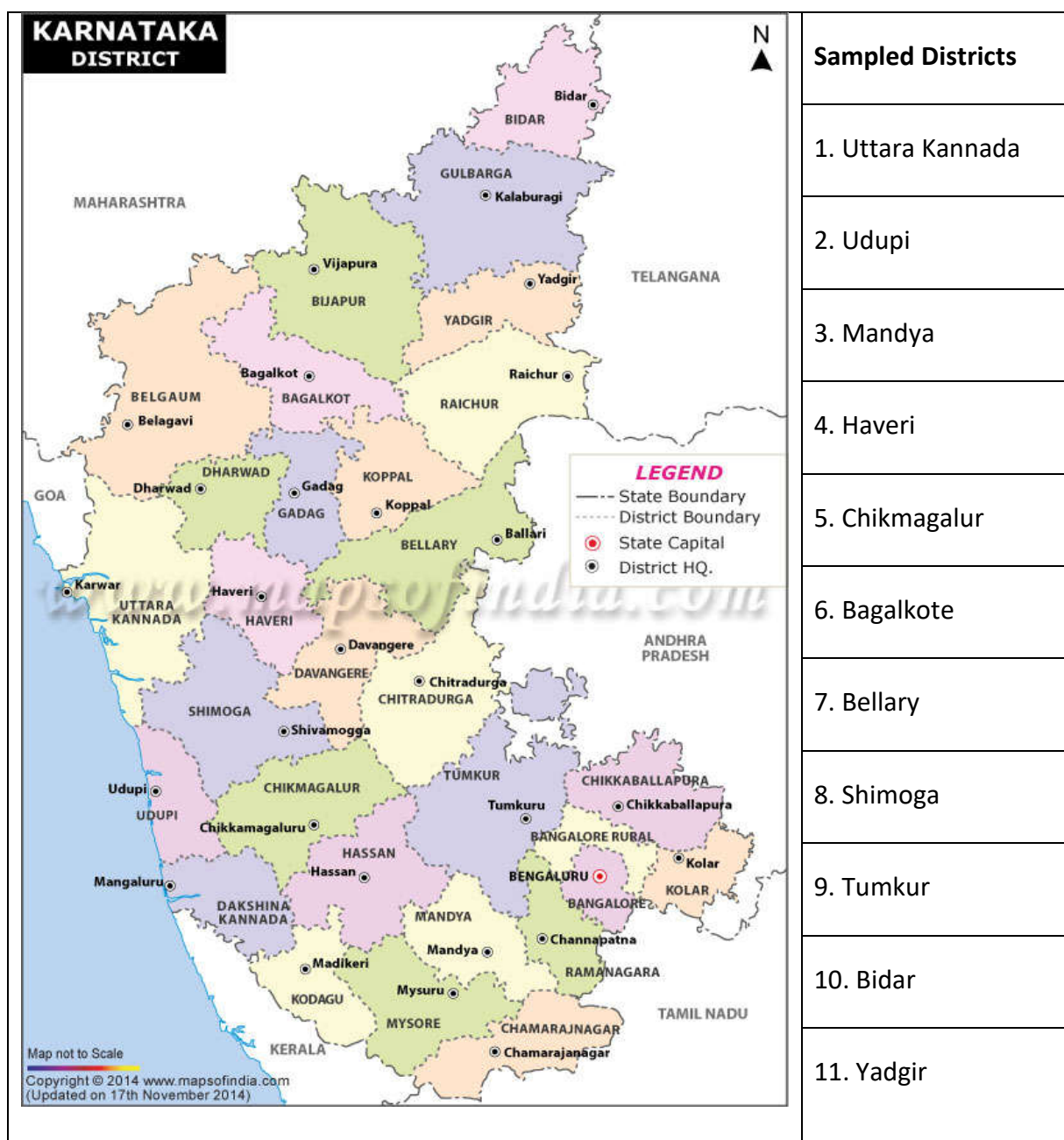
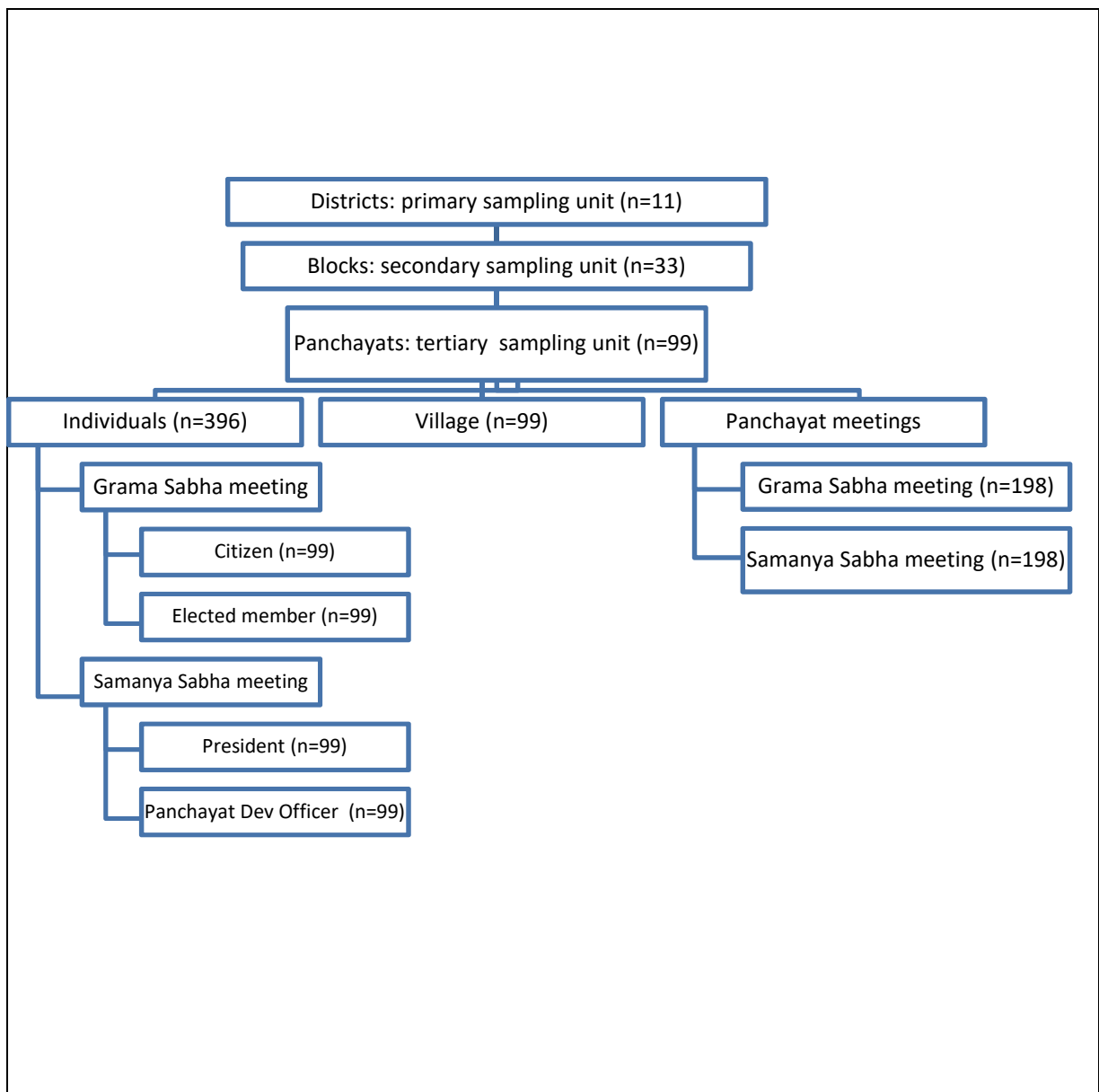


Figure 4.2: Schematic Representation of the Sampling Strategy



CHAPTER 5: MEASURING INDEPENDENT VARIABLES

As discussed in the previous chapter this research used multivariate regression analysis to test the propositions. The present chapter explains the measurement of independent (explanatory) variables used in different regression models. The measurement of dependent (outcome) variables is explained in chapters dedicated to describing and discussing the results of testing of the propositions. This chapter is organised as follows:

The first section discusses the approaches to measuring the deliberative participation. The second and third sections describe the measurement of deliberative participation in Grama Sabha and Samanya Sabha meetings respectively. The fourth and fifth sections describe the measurement of independent variables at Panchayat and village levels, and at the individual level respectively.

5.1 APPROACHES TO MEASURING THE DELIBERATIVE PARTICIPATION

This research defines deliberative participation as, a collective action in the deliberative spaces of the Panchayat involving Panchayat citizens, its elected representatives and the Panchayat staff and workers as free and equal agents; with an objective to promote the common good of the citizens of Panchayat through influencing Panchayat's actions either directly by affecting its activities and/or indirectly by affecting the activities of the people responsible for this; through collectively binding decisions arrived in a manner in which reasons and justifications are expected and offered in a mutually acceptable and accessible manner (adapted from Cohen 1997; Verba, Scholzman and Brady 1995; Gutmann and Thompson 2004).

A number of studies have attempted to empirically measure the deliberation in participatory settings. A review of these studies can be found in Jaworski and Coupland (1999); Mendelberg (2002); Carpini, Cooks and Jacobs (2004); Ryfe (2005); Dryzek (2007); Bachtiger, Shikano, Pedrini *et al* (2009); and Black, Burkhalter, Gastil *et al* (2011). These studies have measured deliberation in widely differing contexts, varying from among jury members to classrooms, to among small individual groups to large assemblies. However, these studies have used different measures of deliberation. This is perhaps due to,

evolving debate on what constitutes as deliberation and hence the approaches to measuring it; and variations in context, the purpose of the study, the granularity of deliberation and availability of data (see Black *et al* 2011:324,325).

Nevertheless, their approaches share similarities and can be categorised into three phases. First, the extent to which theoretically derived norms was employed as antecedents to deliberation. Second, how participants responded to them and to each other during the deliberative process, and what impact it had on their preferences. Third, the outputs of the deliberative process as in common good nature of the decisions taken.

These studies have used both direct measures, which focused on variables measuring correspondence between deliberation and its theoretical conception, and indirect measures, which focused on variables indicative of deliberation (Black *et al* 2011). Some of the techniques used were, micro or macro analyses of the discussion content; asking participants about their deliberative experience and its impact on their views/preferences, through structured survey questionnaires or in-depth interviews; conducting integrated case studies, and measuring antecedent conditions for deliberation (*ibid*).

In the context of this research, discussion analysis was not feasible, due to non-availability of data on the discussion. In-depth interviews were also not appropriate as the need was to measure deliberation in varying contexts to generate numerical data for statistical analysis. Using a combination of other techniques, research measured deliberative participation as a composite of three measures: The presence of antecedent conditions for deliberation, as the input measure; the quality of deliberation and its impact on preferences of participants, as the process measure; and the common good nature of decisions taken, as the output measure (see Heller *et al* (2007) and Fung (2006) for similar strategy).

5.1.1 Input Measure: Antecedent Conditions to Deliberative Participation

Heller *et al* (2007) in their study of Panchayats in Kerala State measured, the number of meetings, the number of participants, the social composition of the participants and their propensity to participate, as antecedent conditions. Fung (2006) in his conceptualisation of

empowered participatory governance argued for a process of selection of participants who are representative of the community, as an antecedent to the deliberation. Informed by above studies, the discussions in Chapter Three (Section 3.3.1), the specifications in the 1993 Act and the availability of the data, the research arrived at a set of variables to measure the antecedent conditions to the deliberation (please see Tables 5.2 and 5.3).

5.1.2 Process measure: Quality of Deliberation

This section will first review few key studies which have empirically measured the quality of deliberation, and then building on these measures it arrives at a strategy to measure it in the Panchayat meetings.

Steenbergen, Bachtiger, Spordli *et al* (2003) in their Discourse Quality Index (DQI) based on Habermas' discourse ethics, used the following ordinal measures: participation (normal participation or interruption), levels of justification given for arguments (none, inferior, qualified, or superior justification), the content of justification given, respect for different groups of people (none, implicit, or explicit), respect for counterarguments (counterarguments ignored, degraded, neutrally included, or valued), and constructive politics or consensus-building (positional politics, alternative proposal, or mediating proposal). They used it for measuring deliberation in British Parliament and found it to be reliable.

Stromer-Galley (2007) analysed deliberations related to school policy along six dimensions: reasoned opinion expression, references to external sources when articulating opinions, expressions of disagreement and hence exposure to diverse perspectives, equal levels of participation during the deliberation, coherence with regard to the structure and the topic of deliberation, and engagement among participants. She used an elaborate coding scheme for measurement.

Gastil, Black and Mascovitz (2008) while examining the impact of deliberation on attitude in small groups, measured deliberation using seven dimensions and rated them on a scale of one to seven. The dimensions were: acceptance within the group, chances to speak,

understanding discussions, alertness, and involvedness in the discussion, consideration of other opinions, respect by others to one's own opinion, and rudeness and impoliteness.

Nabatchi (2007) used a ten item index, measured on a scale of one to five, to measure deliberation in an assembly on a policy issue. The items were: consensus, exploring alternative, shared values, consideration to fellow participants, diversity and representativeness of the participants, equal speaking turns and outcomes as in changing one's opinion. She used factor analysis to test the reliability and to improve the convergent validity of the measure.

Bachtinger *et al* (2009) expanded the deliberative quality index of Steenbergen *et al* (2003) to improve its construct validity and proposed these dimensions: Equality in participation (non-dominance and equality across socio-economic statuses); justification rationality (linkage between reason and conclusion); common good orientation (arguments made in favour of: narrow group interests, neutral/mixed or common good); respect and agreement (respect towards groups, respect for differing demand and respect for counterarguments); interactivity (degree and nature of exchange between participants in terms of listening, internalising and responding); constructive politics (to achieve consensus through alternative proposals, active mediation and appeals for consensus); storytelling (it brings in openness to the proceedings and its ambiguity provides the necessary stimulus for deliberations; see also Ryfe 2005); and coercive negotiations/bargaining (extent of use of threats, power and influence derived from endowments or positions of authority in the negotiation process). They used this to assess deliberation in Swiss parliament and found it to be reliable.

This research found the measure proposed by Bachtinger *et al* (2009) as very comprehensive and it closely matched the tenets of the deliberative theory as discussed in Sections 3.2 and 3.3. So, it based the measurement of deliberation, at the individual level, in Panchayat meetings, on this measure and borrowed from other studies where appropriate. The research used a 16 item index measured on a scale of 1 (strongly

disagree) to 5 (strongly agree). It used factor analysis to create the composite measure, the quality of deliberation (DELQUA). Table 5.1 lists the 16 items.

The 16 items in the individual data set with a sample size of 373 complete cases were used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. The item number 15 showed high correlation (multi-collinearity) with item number 13 resulting in a singularity in the polychoric correlation matrix, and hence this item was dropped. The item number 16 negatively correlated with rest of the items and Cronbach's alpha improved from 0.68 to 0.70 on dropping this item. Following this, principal factor extraction was performed on the remaining 14 items with oblique oblimin rotation. This yielded one factor with an Eigenvalue >1 . This factor explained 78% of the variance. It was well defined with all the items loading at >0.32 , except item number 10 and 13 which loaded at 0.18 and 0.24 respectively. Item number 3 and 12 were complex with a loading of >0.32 in two factors.

The Bartlett's test of sphericity was significant ($p < 0.001$), suggesting correlation among variables was appropriate for factor analysis, the Kaiser-Meyer-Olkin (KMO)²³ measure of sampling adequacy was 0.75, average Squared Multiple Correlation (SMC)²⁴ was 0.26 and average communality²⁵ was 0.35. The first factor was interpreted as the quality of deliberation (DELQUA) and was extracted. The variable DELQUA had 4 outliers with a z score of $\geq |3.29|$ and the results were not sensitive to them. The items loading into the DELQUA exhibited internal consistency with a Cronbach's Alpha of 0.70.

5.1.3 Output measure: Nature of the Decisions Taken

Informed by the studies reviewed in this section and the discussion in Chapter Three, this research measured outputs of deliberation in terms of total number of decisions taken; and proportions of which, having common good orientation and on local public issues.

²³ Assessing KMO values: Unacceptable 0.00-0.49; miserable 0.50–0.59; mediocre 0.60-0.69; middling 0.70-0.79; meritorious 0.80-0.89 and marvelous 0.90-1.00 (Kaiser 1974)

²⁴ SMC of an item is the R^2 of the regression of that item on all other items (Tabachnick and Fidell 2013)

²⁵ The communality of an item is the proportion of its variance accounted for by the factors (Tabachnick and Fidell 2013: 674)

5.2 MEASURING DELIBERATIVE PARTICIPATION IN THE GRAMA SABHA MEETINGS

This was measured as a composite of three measures:

- Input measure: Antecedent conditions to deliberation in both the sampled meetings
- Process measure: The quality of deliberation
- Output measure: Number of decisions taken and their nature, in both the sampled meetings.

For measuring the antecedent conditions and the outputs, the data were extracted from the records maintained at the Panchayat office, using Panchayat questionnaire. For the quality of deliberation, the average of the DELQUA scores of the citizen and the elected member of that Panchayat was taken from the individual data set. Table 5.2 lists the 19 items.

The 19 items in the Panchayat data set with a sample size of 73 complete cases were used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. The item numbers 11 and 16 showed high correlations (multi-collinearity) with item numbers 12 and 17 resulting in singularity in the polychoric correlation matrix, and hence these items were dropped. Then, principal factor extraction was performed with oblique oblmin rotation, using 17 items. This yielded one factor with an Eigenvalue >1 . This factor explained 48% of the variance. It was well defined with all the items loading at >0.32 , except item number 2 which loaded at 0.22. Most of the items were complex with a loading of >0.32 in two or more factors.

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.58, average Squared Multiple Correlation (SMC) was 0.82 and average communality was 0.84. The first factor was interpreted as deliberative participation in Grama Sabha meeting (GRAPAR) and was extracted. The items loading into the GRAPAR exhibited internal consistency with a Cronbach's Alpha of 0.88.

5.3 MEASURING DELIBERATIVE PARTICIPATION IN THE SAMANYA SABHA MEETINGS

The approach used was identical to that used for measuring Grama Sabha meetings. However, for measuring the quality of deliberation, the average of the DELQUA scores of the President and the PDO for that panchayat were used. Table 5.3 lists the 14 items and their factor loadings.

14 items in the Panchayat data set with a sample size of 73 complete cases was used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. Following this, principal factor extraction was performed with oblique oblimin rotation. This yielded one factor with an Eigenvalue >1 . This factor explained 36% of the variance. It was well defined with all the items loading at >0.32 , except item numbers 10 and 14 which loaded at 0.26 and 0.01. Most of the items were complex with a loading of >0.32 in two or more factors.

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.50, average Squared Multiple Correlation (SMC) was 0.71 and average communality was 0.74. The first factor was interpreted as deliberative participation in Samanya Sabha meeting (SAMPAR) and was extracted. The items loading into the SAMPAR exhibited internal consistency with a Cronbach's Alpha of 0.76.

5.4 MEASURING PANCHAYAT AND VILLAGE LEVEL VARIABLES

These variables were obtained from the Panchayat data set with 73 complete observations and from the corresponding observations in the village data set.

PPRMEN indicates the gender of the Panchayat President, with men coded as '1' and women as '0'

PPREDU measures education level of the President. It was coded as follows: 1= illiterate, 2=literate (can write their name) but have not attended formal schooling, 3= have 1-4 years of formal schooling, 4=have 5-7 years of formal schooling, 5=have 8-10 years of

formal schooling, 6: have 1-2 years of pre-under-graduate college education, and 7=have undergraduate degree or even higher level of education

PPRNTE indicates the number of terms the Panchayat President had served as President and coded as '0' if =1 and as '1' if >1.

PEMTOT is the total number of elected members in the Panchayat.

CAOMEN indicates the gender of the chief administrative officer (Panchayat Development officer, or secretary in his/her absence) of the Panchayat, with men coded as '1' and women as '0'.

CAOEDU Indicates whether chief administrative officer holds a graduate degree and coded as '1' if yes and '0' if no

PSTTOT indicates the total number of staff in the Panchayat and coded as '0' if =1 and '1' if >1

PSTNPR measures number of Panchayats, the staff were responsible for and coded as '0' if =1 and as '1' if >1

PSTYOS measures the average experience in years of the Panchayat staff and coded as '0' if <2 years and as '1' if ≥ 2 years.

PWOPRO measures the number of Panchayat workers per 1,000 population of the Panchayat

PANARE measures the area of the Panchayat in square kilometers

PANVIL measures the number of villages in the Panchayat

PANSVI indicates whether the Panchayat has a single village in its jurisdiction, and coded as '0' if no and as '1' if yes.

PANHHO measure the number of households in the Panchayat

PANPOP measures the Panchayat population

PANWOM measures the proportion of Panchayat population who are women

PANSTC measures the proportion of Panchayat population who belong to Scheduled Caste or Scheduled Tribe.

PANBPL measures the proportion of Panchayat households categorized as below poverty line. Please also see HHOBPL.

PANBLT measures proportion of population who were literate at the block level

CASNUM measures the number of caste/social groups in the Panchayat. This was the average at the Panchayat level, of the values reported by the individuals in the individual data set.

PANDEV Panchayats in the sample varied widely in terms of area, population density, the number of other Government organizations and degree of economic and social activities. Research used a set of 16 items to capture this and these were: population density; transportation links (connectivity to rail, state highways and national highways) and number of: villages, cooperatives, banks, fair price shops, trading shops, primary schools, high schools, colleges, child care centres, health sub-centres, primary health centres, private health facilities, veterinary health centres and village accountant office.

The 16 items in the Panchayat data set with a sample size of 73 complete observations was used for factor analysis. Principal component extraction was performed with varimax rotation. This yielded two components with an Eigenvalue >1. This first component explained 33% of total variance. It was well defined with most of the items loading at >0.32, with the exception of those measuring population density (0.18), fair price shops (0.18), primary schools (0.12) and child care centres (0.27).

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.75 and average Squared Multiple Correlation (SMC) was 0.61. The first factor was interpreted as Panchayat development (PANDEV) and was extracted. The items

loading into the PANDEV exhibited internal consistency with a Cronbach's Alpha of 0.81. A single outlier with a z score of $\geq |3.29|$ was present and the results were not sensitive to it.

INFPUB As part of the transparency measure the Panchayats are expected to display key information about their programmes and operations, in prominent public spaces. The display of information on following programmes/operations was measured:

1. The Sakala, the grievance redress programme
2. The MGNREGA programme
3. The Panchayat committees,
4. The Right to Information Act,
5. Panchayat's annual income and expenditure details, and
6. Information on public works completed by the Panchayat in the previous year.

If the information was not displayed at all it was coded as '0', if displayed but not updated it was coded as '0.5' and if displayed and updated it was coded as '1'.

The 6 items in the village data set with a sample size of 73 were used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. Following this, principal factor extraction was performed with oblique oblimin rotation. This yielded one factor with an Eigenvalue >1 . This first factor explained 97% of the variance. It was well defined with all the items loading at >0.32 . Three items were complex with a loading of >0.32 in two factors.

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.76, average Squared Multiple Correlation (SMC) was 0.49 and average communality was 0.56. The first factor was interpreted as the information in public spaces (INFPUB) and was extracted. The items loading into the INFPUB exhibited internal consistency with a Cronbach's Alpha of 0.71.

PANASS measures the number of associations per 1,000 population of Panchayat. These associations can be that of farmers', traders', related to religion/caste, microcredit (self-

help) groups, milk producers' or not-for-profit organizations; with social, economic or political objectives

PANASP indicates whether the Panchayat has received special developmental grants in the period 2010-2013, and coded as '0' if no and as '1' if yes. These grants are provided for the Panchayats located in the less developed regions of the Karnataka State (see Nanjundappa 2002).

PANRCH is the total revenue collected per household, by the Panchayat for the year 2012-13.

VILHHO measures the total number of households at the village.

VILSTC measures the proportion of village population who belong to Scheduled Caste or Scheduled Tribe.

VILBPL measures the proportion of village households which were categorized as below poverty line.

VILWME measures the number of households sharing a waterman. Watermen are Panchayat workers responsible for maintenance of the water supply system.

VILDEV measure is similar to PANDEV and measured at the village level. Set of 11 items used to measure this were: number of households, the density of households, and the number of: primary schools, middle schools, high schools, colleges, child care centres, health sub-centres, primary health care centres, private health facilities and trading shops.

The 11 items in the Panchayat data set with a sample size of 73 complete observations was used for factor analysis. Principal component extraction was performed with varimax rotation. This yielded three components with an Eigenvalue >1. This first component explained 54% of the total variance. It was well defined with most of the items loading at >0.32, with the exception of those measuring household density (0.15), primary schools (0.23), health sub-centres (0.23) and primary health centres (0.27).

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.70 and average Squared Multiple Correlation (SMC) was 0.76. The first factor was interpreted as the village development (VILDEV) and was extracted. The items loading into the VILDEV exhibited internal consistency with a Cronbach's Alpha of 0.89. A single outlier with a z score of $\geq |3.29|$ was present and the results were not sensitive to it.

5.5 MEASURING INDIVIDUAL LEVEL VARIABLES

These variables were obtained from the individual data set with 373 complete observations

FREPAR measures the frequency of participation in below mentioned deliberative meetings of Panchayat in the last three years; except for the item 4 for which it was last one year:

1. Ward Sabha meetings (INDWSA) convened bi-annually at the ward level,
2. Grama Sabha meetings (INDGRA) convened bi-annually at the Panchayat level,
3. MGNREGA Grama Sabha meeting (INDMGM) convened annually at the Panchayat level,
4. Samanya Sabha meeting (INDSAM) convened every month at the Panchayat council level²⁶,
5. Jama Bandhi social audit meeting (INDJMA) convened annually at the Panchayat level, and
6. MGNREGA social audit meeting (INDMSA) convened annually at the Panchayat level.

The composite measure for frequency in participation in these meetings (DPPIND) was arrived by linearly aggregating the attendance scores for each of the meeting as shown below.

$$FREPAR = \sum_{i=1}^{n=37} (INDWSA_i + INDGRA_i + INDMGM_i + INDSAM_i + INDJMA_i + INDMSA_i)$$

CITIZN indicates whether the respondent was an ordinary citizen, and coded as '1' if yes and as '0' if no.

²⁶ Panchayat citizens can attend Samanya Sabha. However they do not have voting right in the proceedings.

ELEMEN indicates whether the respondent was an elected member, and coded as '1' if yes and as '0' if no.

PRESID indicates whether the respondent was the President, and coded as '1' if yes and as '0' if no.

BUREAU indicates whether the respondent was a Panchayat development officer or Secretary, and coded as '1' if yes and as '0' if no.

INDMEN Indicates the gender of the respondent, with men coded as '1' and women as '0'.

INDEDU measures the education level of respondent by the number of years of formal schooling they have had. For coding strategy please see PPREDU.

INDAGE measures the age of the respondent in years.

INDSTC indicates whether the respondent belongs to Scheduled Caste or Scheduled Tribe, and coded as '1' if they do and '0' if they do not.

ELECAN measures the number of times respondent has canvassed in elections in the last three years.

ASSPAR measures the number of times respondent has participated in meetings of the local associations in the last one year.

INFSOU: measures number of sources of information the respondent accesses, to know about the local affairs. The option ranges from friends, family members, newspapers, television, radio, to local officials.

VILFAM indicates whether the respondent felt familiar with the villages in the Panchayat, and has links with them, and coded as '1' if they have and as '0' if they don't.

HHOECO indicates whether any member of respondent's household had contested in any elections, and coded as '1' if they have and as '0' if they haven't.

HHOAPA indicates participation by any member of respondent's household in meetings of the associations mentioned under ASSPAR, and coded as '1' if they have and as '0' if they haven't.

HHOS80 measures the proportion of the household members who have had at least high school level education (up to 8-10 years of formal schooling).

HHOBPL Respondents from households with a below poverty line (BPL) status were coded as '1' and others were coded as '0'. To test the validity of this measure, a factor score (HHOASS) of ownership of 10 household items (self-constructed toilets, own water facilities, radio, tape recorder, cooking gas, refrigerator, television, computer, cycle and motorised two-wheeler vehicle) was extracted from the individual data set using principal component method (see Vyas and Kumaranayake 2006 on using similar approach to measure economic status of the household). Then association between HHOBPL and HHOASS was examined using independent-samples t-test ($n=373$). There was a significant difference in asset ownership between non-BPL households (mean=.76; Std Dev=.33) and BPL households (mean=.37; Std Dev=.24); $t(371) = 13.30$; $p < .001$). This suggests HHOBPL can be a valid indicator of the economic status of the household.

HHOCHI measures the number of children in the household who were below six years of age.

Table 5.1: The List of Items Used to Measure the Quality of Deliberation

Dimensions	Items	Mean	SD	Factor loadings
Equality in participation	1. There is equality in participation	4.09	0.88	0.48
	2. The participants have equal opportunity to engage in discussions	4.41	0.78	0.52
Respect and agreement	3. The participants show respect to each other	4.15	0.64	0.47
	4. The participants show respect to opinions other than their own	4.05	0.80	0.60
Justification rationality	5. There is rationality for the justifications offered by the participants	3.88	0.79	0.48
Common good orientation	6. There is common good orientation in opinions expressed by the participants	3.80	1.11	0.44
Interactivity	7. The participants interact with each other	3.81	1.09	0.56
	8. The participants make efforts to listen and understand what others are saying and then reply	4.21	0.71	0.39
Constructive politics	9. The participants make credible alternative proposals for issues under discussion	4.09	0.80	0.49
	10. There is active mediation by the participants to achieve consensus	4.11	1.06	0.18
Storytelling	11. The participants use storytelling or anecdotal experiences to make their point	3.74	0.96	0.46
Coercive negotiations /bargaining	12. The participants use coercive methods such as threats while making their point	4.27	1.10	0.38
Impact of deliberation	13. In the discussion encountered viewpoints different from your own	4.11	0.96	0.24
	14. Manner of conduct of the Panchayat officials in the meeting increased your trust in them	4.30	0.87	0.52
	15. Discussions made you think critically about reconsidering/changing their opinion on issues?	Dropped		
	16. In the meeting, decisions taken collectively by all present were better than those taken by the panchayat officials and elected members	Dropped		

Table 5.2: The List of Items Used to Measure Deliberative Participation in the Grama Sabha Meeting

	Items	Measurement level	Mean	SD	Factor loadings
A	Number of meetings held in the year 2012-13				
1	Number of Grama Sabha meetings held	Count	1.64	0.65	0.63
2	Number of MGNREGA Grama Sabha meetings held	Count	0.59	0.55	0.22
B	Antecedent conditions in the first sampled meeting				
3	Number of total participants per 1,000 population of the Panchayat	Count	16.43	10.00	0.56
4	Number of women participants per 1,000 women population of the Panchayat	Count	12.00	9.50	0.59
5	Number of elected members as a proportion of total number of elected members	Ratio	0.85	0.24	0.47
6	Number of Panchayat staff and workers as a proportion of total number of Panchayat staff and workers	Ratio	0.45	0.31	0.56
7	Total number of officials from other Government departments	Count	3.80	3.77	0.44
C	Outputs of deliberation in the first sampled meeting				
8	Number of topics discussed	Count	4.73	2.78	0.72
9	Number of decisions which had common good orientation	Count	6.82	4.82	0.66
10	Number of decisions on local issues	Count	1.77	2.53	0.67
D	Antecedent conditions in the second sampled meeting				
11	Number of total participants per 1,000 population of the Panchayat	Count	9.90	12.04	dropped
12	Number of women participants per 1,000 women population of the Panchayat	Count	7.32	9.92	0.71
13	Number of elected members as a proportion of total number of elected members	Ratio	0.53	0.45	0.71

	Items	Measurem ent level	Mean	SD	Factor loadings
14	Number of Panchayat staff and workers as a proportion of total number of Panchayat staff and workers	Ratio	0.31	0.34	0.75
15	Total number of officials from other Government departments	Count	2.20	3.18	0.68
E	Outputs of deliberation in the second sampled meeting				
16	Number of topics discussed	Count	2.93	2.94	dropped
17	Number of decisions which had common good orientation	Count	3.74	4.11	0.77
18	Number of decisions on local issues	Count	1.05	1.93	0.84
F	Quality of deliberation in the most recently held meeting				
19	Average of quality of deliberation score (DELQUA) for the citizen and the elected member of the Panchayat	Ratio	-0.01	0.70	0.41

Table 5.3: The List of Items Used to Measure Deliberative Participation in the Samanya Sabha meeting

	Items	Measurement level	Mean	SD	Factor loadings
A	Number of meetings held in the year 2012-13				
1	Number of Samanya Sabha meetings held	Count	7.69	2.67	0.43
B	Antecedent conditions in the first sampled meeting				
2	Number of elected members as a proportion of total number of elected members	Ratio	0.88	0.16	0.70
3	Number of women members as a proportion of total number of elected members	Ratio	0.42	0.12	0.61
4	Number of Scheduled Caste members as a proportion of total number of elected members	Ratio	0.15	0.07	0.35
5	Number of Scheduled Tribe members as a proportion of total number of elected members	Ratio	0.10	0.08	0.70
C	Outputs of deliberation in the first sampled meeting				
6	Number of topics discussed	Count	4.34	1.97	0.67
7	Number of decisions which had a common good orientation	Count	5.73	3.63	0.63
D	Antecedent conditions in the second sampled meeting				
8	Number of elected members as a proportion of total number of elected members	Ratio	0.89	0.13	0.47
9	Number of women members as a proportion of total number of elected members	Ratio	0.42	0.11	0.49
10	Number of Scheduled Caste members as a proportion of total number of elected members	Ratio	0.16	0.08	0.26
11	Number of Scheduled Tribe members as a proportion of total number of elected members	Ratio	0.10	0.07	0.58
E	Outputs of deliberation in the second sampled meeting				
12	Number of topics discussed	Count	4.45	2.14	0.47
13	Number of decisions which had common good orientation	Count	5.36	3.74	0.32
F	Quality of deliberation in the most recently held meeting				
14	Average of quality of deliberation score (DELQUA) for the President and the PDO of the Panchayat	Ratio	0.13	0.70	0.01

Table 5.4: Descriptive Statistics of the Panchayat and the Village Level Variables

Variable label	Complete cases (n=73)					Total cases (n=99)
	Minimum Value	Maximum Value	Mean	Standard Deviation	Skewness	Mean
GRAPAR	-0.03	19.68	6.39	3.67	0.71	-
SAMPAR	-3.12	2.46	0	0.95	-0.42	-
PPRMEN ¹	0	1	0.39	-	-	0.35
PPREDU	1	7	4.44	1.51	-0.01	4.40
PPRNTE	1	4	1.17	0.50	3.45	1.17
PEMTOT	5	38	15.34	6.16	1.22	15.78
CAOMEN ¹	0	1	0.89	-	-	0.91
CAOEDU ¹	0	1	0.77	-	-	0.77
PSTTOT ¹	0	1	0.54	-	-	0.54
PSTNPR ¹	0	1	0.38	-	-	0.45
PSTYOS ¹	0	1	0.38	-	-	0.32
PWOPRO	1	7	3.29	0.99	0.77	3.22
PANARE ²	1.46	376.22	49.50	64.28	2.88	51.14
PANVIL	1	23	5.00	4.27	1.59	5.00
PANSVI ¹	0	1	0.16	-	-	0.17
PANHHO ²	580.00	4,117.00	1,501.00	720.00	1.27	1,548.00
PANPOP ²	1,448.00	15,041.00	5,828.00	2,501.00	1.28	6,052.00
PANWOM ²	0.47	0.55	0.50	.02	1.44	0.51
PANSTC ²	0.018	0.61	0.23	0.13	0.69	0.24
PANBPL ²	0.06	0.97	0.51	0.25	0.01	0.49
PANBLT ²	40.8	86.6	72.2	9.15	-0.86	70.03
PANASS	0.48	80.11	12.27	11.32	3.57	11.61
CASNUM	3.75	12.5	7.37	1.77	0.61	7.08
INF PUB	0	1.12	0.40	0.30	0.16	0.70
PANDEV	3.27	431.5	48.7	72.52	4.03	30.44
PANASP ¹	0	1	0.38	-	-	0.57
PANRCH ²	0	1,673.88 (~£ 17.00)	151.30 (~£ 1.50)	216.33 (~£ 2.00)	4.66	146.8 (n=98) (~£ 1.50)
VILHHO ²	35	2,460	664.00	592	1.52	680.00
VILSTC ²	0	0.88	0.23	0.18	1.35	0.21
VILBPL ²	0	0.98	0.51	0.28	-0.03	0.51 (n=97)
VILWME	0	2032	449	374	1.99	473 (n=95)
VILDEV	14.66	1114.01	249.86	227.98	1.77	-
¹ For variables with binary measurement 'mean' column shows the proportion of the split.						
² Data was obtained from the Ministry of Rural Development and Panchayat Raj, Government of Karnataka; and is based on 2001 census						

Table 5.5: Descriptive Statistics of the Individual Level Variables

Variable label	Minimum value	Maximum value	Mean	Standard deviation	Skewness
FREPAR	1	104	24.35	14.64	1.22
DELQUA	3.20	8.35	6.89	0.74	-1.23
INDMEN ¹	0.00	1.00	0.78	-	-
INDAGE	22.00	75.00	42.33	10.38	0.63
INDEDU	1.00	7.00	5.18	1.68	-0.63
INDSTC ¹	0.00	1.00	0.33	-	-
CITIZN ¹	0.00	1.00	0.25	-	-
PRESID ¹	0.00	1.00	0.25	-	-
ELEMEN ¹	0.00	1.00	0.26	-	-
BUREAU ¹	0.00	1.00	0.24	-	-
ELECAN	0.00	7.00	1.98	1.97	0.52
ASSPAR	0.00	68.00	10.20	10.24	2.61
INFSOU	1.00	8.00	2.94	1.09	1.80
VILFAM ¹	0.00	1.00	0.95	-	-
HHOECO ¹	0.00	1.00	0.25	-	-
HHOAPA ¹	0.00	1.00	0.51	-	-
HHOS80	0.00	1.00	0.57	0.27	-0.10
HHOCHI	0	10	0.75	1.19	2.87
HHOBPL ¹	0.00	1.00	0.50	-	-
¹ For variables with binary measurement 'mean' column shows the proportion of the split. n=373					

CHAPTER 6: DELIBERATIVE PARTICIPATION AND LEVEL OF INFORMATION STRUCTURE

The most valuable commodity I know of is information

Gordon Gekko, Wall Street

This thesis started by describing the sub-optimal correspondence between citizens' need for local public health goods and provision of them by the Panchayats; the adverse social, health and economic implications of this and hence the need to improve the correspondence.

Then it explained, improving correspondence required collective action at the Panchayat level, involving its citizens, the elected members and the bureaucrats. Then it analysed, achieving and sustaining collective action requires individuals;

- To clearly articulate their preferences for which they need information on availability and accessibility to local public health goods;
- To effectively communicate their articulated preferences for which they need to feel politically efficacious in that their views/opinion matter in collective choice setting; and
- To collectivise their communicated preferences responsively for which they need a sense of community, as in having cooperative goals and coordinated strategies to find mutual needs and seek convergence when they are heterogeneous.

Then it theorised deliberative participatory institutions of the Panchayat can provide the mechanisms to achieve and sustain collective action. In support of this, it proposed, better deliberative participation can be associated with better levels of information, political efficacy and sense of community; at the level of the participants.

To empirically test these propositions, it collected primary data from Panchayats in Karnataka State; and from villages and individuals within these Panchayats through a cross-sectional field survey. The present chapter and the two chapters following it describe and discuss the results of these tests.

This chapter examines how individuals' level of information structure about the local public health goods can influence their articulation of preferences for these goods; and empirically tests the proposition that better deliberative participation is associated with better levels of information structure, at the individual participant level. The chapter is organised as follows:

The first section describes the key elements of the information structure. The second section explains how information structure can influence preference articulation. The third section describes the strategy to measure the level of information structure. The fourth section specifies the model to empirically test the proposed association. The fifth section describes the results of testing. The sixth section discusses the results and then concludes.

6.1 INFORMATION STRUCTURE AND PREFERENCE ARTICULATION

Section 2.4.2 discussed the ability of the citizens to articulate their preference for local public health goods depends on their level of information on a set of elements which together constitute their information structure. The three key elements of this information structure (henceforth information) are information on rules of the deliberative meetings for arriving at the collective choice, property rights of the local public health goods, and preferences of other individuals.

Rules of the deliberative meetings:

One of the objectives of the deliberative meetings of the Panchayat is to elicit prevalent preferences in the community for local public health goods and collectivise them into common preferences in a responsive manner, such that it benefits the largest section of the community. To govern the individual and collective behaviour towards achieving this objective, these meetings are structured by a set of rules specified in the 1993 Act.

Some of these rules are; scope rules, which define the overall scope of the collective choice outcome; boundary rules, which specify eligibility to participate; position rules, which creates positions, assigns functions to them, assigns actors to perform these functions; Information rules, which provides information they need to perform these functions and specifies their behaviour in performance of these functions; the aggregation

rules, which specify collectivisation of preferences; and choice rules, which specify which actions are allowed and which are not allowed (see Ostrom 2005:190-9; see also Section 3.3).

Property rights of local public health goods:

Property rights are a set of social institutions which specify the range of privileges granted to individual(s) over an economic good (Alchian 2015; Libecap 1989:1). These privileges can range from bequeathing, transferring, transforming, using, and deriving income from the good. The property rights shape the individual's economic behaviour as they determine the costs, the benefits and hence the competition for the good (ibid). Depending on the exclusivity over their rights, the goods can be private or public (ibid; see also Cornes and Sandler 1996:8-10). For local public health goods, the property rights are related to their access, withdrawal, and management,

To illustrate, in the case of a public water tap located in a street, the access rights are about which households can use water from it, those located in that street or even the ones from neighbouring streets. The withdrawal rights are about how much water they can draw from it, measured in terms of time or quantity. The management rights are about who decides, whether it should be a tap or an open well; in which street it should be located; where exactly in that street; for how many hours water should be supplied; during which part of the day; and how much tax should be charged; on what basis; to which all households. While, which household will be taxed and how much, can be a formal rule, how much water can be withdrawn can be a norm developed by the households in the street based on individual household need.

Information about the property rights and the rules of the deliberative meetings can be complex. Complexity is a function of a number of attributes of the good, their amenability to measurement, the specification of rights over it, and allocation, protection and enforcement of these rights (North 1990; Section 2.4.1). To put this into perspective, The World Bank (2007:12) estimated that there are 24 programmes related to the provision of drinking water and 500 programs related to health running through the five levels of

Government (Central Government, State Government, District Panchayat, Block Panchayat and Gram Panchayat) with overlapping functions. Similarly, Rao (2004) counted 69 programmes directed at the welfare of the disadvantaged section of the community with overlapping objectives running through the five levels of Government.

Preferences of other individuals:

Knowledge of other's preferences not only influences articulation of one's own preference but is also a pre-requisite for collectivisation of preferences. For instance, if the majority of the participants prefer public taps over open well, then this information about the majority preference and the reasons for that preference, will influence how the minority who are either undecided or may prefer open well, either form or reconsider, their own preference.

Against complexity of this nature, for individuals to articulate their preferences, not only do they need access to information but also the cognitive capability to process it. Schofield (1985) observes, fundamental to achieving this is the manner in which individuals attain information about, each other's preferences such that it becomes common knowledge.

6.2 INCOMPLETE INFORMATION STRUCTURE AND ITS IMPLICATION ON PREFERENCE ARTICULATION

The new source of power is not money in the hands of few but information in the hands of many

John Naisbitt

The completeness²⁷ of information in an individual depends on the availability of the information, the cost of acquiring it, availability of resources to acquire it, and cognitive capability to process it such that it can be acted upon. When the individuals' information structure is complete, they can be expected to be rational in their preference articulation (Ostrom 2005:101-09). Rationality, based on expected utility theory of behaviour, implies consistency between information and preference, guided by the motive to maximise

²⁷ Game theorists make a distinction between incomplete information and imperfect information. Information is deemed to be incomplete when the players do not know rules of the game, which in the context of this research is, not knowing about rules of deliberative institution or about property rights. Information is imperfect when there is uncertainty about the actual behaviour of the players, as they are unaware of the evolution of the game till the point when a new decision is to be made (see Philips 1988:8-10; Molho 1997:16). However, this research does not distinguish between these terms and uses them synonymously.

utility²⁸ (Heap, Hollis and Lyons *et al.* 1992:4-14). When faced with a set of choices individuals' preference for a particular choice will be consistent, homogeneous and easy to collectivise it into single peaked common preference (see Ostrom 2005:101-09, *ibid*)²⁹.

For instance, if all the individuals have similar information that, hand operated tube well as against open well, is a safer, hygienic, convenient and cheaper option, then collectivisation of this into a policy objective for provision will be easier.

When adequate information is not available, or when there is variation, in economic or social resources to acquire it or capability to process it, information can be incomplete, at the individual level and asymmetric in distribution at the community level. Under incomplete information individual's rationality becomes bounded, resulting in incongruence between the model of the real world and the mental construct of it (Simon 1986:25-40; North 1990:15-19, Ostrom 2005:104-9). This incongruence makes preferences uncertain. Different individuals then select different norms and conventions (heuristics) to overcome uncertainty with a utility satisficing motive (adapted from Kahneman and Tversky 1979, *ibid*). This can lead to a disparate set of heterogeneous preferences rendering collectivisation of them difficult.

For instance, rural household toilets have several variants based on cost, technical efficiency and biophysical attributes of the location. If different individuals have different information structure about these variants, their preference for toilets will be heterogeneous.

Completeness of information is also affected depending on whether information, by itself, is a private good or a public good. Information as an economic good has characteristics of public good such as non-excludability due to minimal marginal cost and non-subtractability (Birchler and Butler 2007:92), and hence generally does not have a market due to Arrow's paradox, which states: "[T]here is a fundamental paradox in the determination of demand

²⁸ See Hogarth and Reader (1987) for limitation of instrumental rationality.

²⁹ In other words, for every set of property rights of different local public health goods, there is a signal and the individual receives this signal with certainty (probability of 1) and the process is noiseless (see Philips 1988:2)

for information; its value for the purchaser is not known until he knows the information, but then he has in effect acquired it without cost” (Arrow 1962, cited in Leppala 2013).

However, under conditions, such as when public health goods are limited in availability or are subtractable in nature; information on property rights of these goods acquires economic value as it becomes subtractable. This influences economic behaviour of the individuals. They incur a cost to acquire this information and make it excludable to lessen competition so that it becomes private (good) and their preference based on this information is not common knowledge and hence the benefit accrues to only those individuals who have the information. Implications are, individuals with better information are better able to secure the property rights of public health goods at the expense of individuals who do not have information about them and hence cannot have a preference for it.

For instance, if a Panchayat has 1,000 households and has a new project under which it can provide 100 households with water taps; access to information about this project has economic benefits. Those with better access will be able to ‘capture’ these taps and hence they incur a cost to keep this information private and those with no access to information would not even know about such a project.

Even if the information is available and accessible; individual’s belief system influences, whether they acquire it and how they process it after acquiring it; in a manner which confirms and conform to their existing belief systems. Akerlof and Dickens (1982) using the theories of cognitive dissonance and supported by empirical evidence showed that persons with similar information structure can interpret a given information in a different manner because of their different belief systems. The persons with different belief systems display different receptivity to the same information.

This shapes not only how they form their own preference for the economic good, but also how they reciprocate to others’ preference for that good. This assumes importance given the differences in preferences for local public health goods and their spatial characteristics

(see Section 2.1). For instance, if an individual believes the open well water tastes better than the public tap water; (s)he may not only prefer the open well, may not even accept health benefits of public taps; but may also, oppose others' preferences for it just to conform to his/her own belief systems. However, another way of looking at this is, if information is viewed as a knowledge/evidence, which is objective, then the higher information should help to dispel the subjective beliefs (Hirshleifer and Riley 1992:170).

6.3 MEASURING THE LEVEL OF INFORMATION STRUCTURE

Given the contextual nature of the information related to local public health goods, it is very difficult to find a comparable and established measure in the literature to borrow. Though studies such as by Ban *et al* (2008) noted the poor level of information about local public health goods, there have been very little attempts to systematically measure it.

This research guided by the framework of information structure and the theoretical constructs contained within, used the relevant Articles and Rules of the 1993 Act (see Section 1.2.4) and the subsequent orders of the Karnataka Government, to identify a set of 51 items/questions to empirically measure the level of information.

For questions with single selection option, one point was awarded for the correct answers and zero points for wrong ones. For questions with multi-select options, one point was awarded for every correct answer and then aggregated at the question level. The questions, assessed information on the following areas of Panchayat functioning (Full list of these questions is available in Table 6.1):

1. **Public good provisioning responsibilities of the Panchayat:** General responsibilities for the Panchayat, how should Panchayat collect information on people's preferences and how should it disseminate information about its services
2. **Deliberative institutions of the Panchayat:** Awareness about existence of these institutions, number of times they should be convened in a year, who all can attend, who all should mandatorily attend, quorum requirement, objectives of these institutions and citizens' role in these institutions

3. **Basic water and sanitation services provided by the Panchayat:** Eligibility to access, procedures related to access and withdrawal, financial assistance from Panchayat, the tax levied by Panchayat for availing these services and the purposes for levying the tax.
4. **Managing basic water and sanitation services:** Responsibility for managing these services, mechanisms to redress grievances related to services; and institutions for social audit of these services: awareness about their existence, who constitutes them, when should they be held and their objectives.

Research used both linear aggregation and factor analysis (see OECD 2008:85) to create a composite measure of the level of Information structure (LEVINF), using 51 items in the Individual data set with a sample size of 373 complete observations.

For the linear aggregation method all the items having other than binary measurement were normalised to have a value range between 0 and 1 using min-max method $([X_i - X(\min)] / [X(\max) - X(\min)])$. Then all the 51 items were linearly aggregated with equal weights to arrive at the composite measure level of information (LEVINF_A). The 51 items exhibited internal consistency with a Cronbach's Alpha of 0.92.

For factor analytic method, items with binary measurement having a split greater than 90/10 were dropped³⁰ (Tabachnick and Fidell 2013:107; see Section 4.4.2). Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices of the items. The items which showed high correlations resulting in a singularity in polychoric correlation matrix were dropped. As a result, the original set of 51 items was reduced to 21 items.

Using these 21 items principal factor extraction was performed with oblique oblimin rotation. This yielded one factor with an Eigenvalue >1. This factor explained 64% of the variance. It was well defined with all the items loading at >0.32, except the item number two which loaded at 0.08. Most of the items were complex with a loading of >0.32 in two or more factors.

³⁰ Dichotomous variable with 90–10 splits has truncated correlation coefficients with other variables and the scores for the cases in the small category are more influential than those in the category with numerous cases (Tabachnick and Fidell 2013:107)

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.71, average Squared Multiple Correlation (SMC) was 0.64 and average communality was 0.67. The first factor was interpreted as the level of information (LEVINF_F) and was extracted. The 21 items loading into the LEVINF_F exhibited internal consistency with a Cronbach's Alpha of 0.88. Though LEVINF_F displayed a strong correlation with LEVINF_A ($r = 0.95$; $p < 0.001$), being composed of only 21 of the original set of 51 items, the construct validity of this measure (LEVINF_F) could not readily be assessed.

6.4 A MODEL TO TEST THE PROPOSITION

In Chapter Three this research proposed that, at the individual participant level, better deliberative participation is associated with the better level of information structure; and now, states it in the form of following hypotheses to empirically test it:

H1: *At the individual participant level, higher the frequency of participation in deliberative meetings of the Panchayat (FREPAR), higher is their level of information structure (LEVINF)*

$$\delta \text{LEVINF} / \delta \text{FREPAR} = \beta_1 > 0$$

H2: *At the individual participant level, higher the quality of deliberation in deliberative meetings of the Panchayat (DELQUA), higher is their level of information structure (LEVINF)*

$$\delta \text{LEVINF} / \delta \text{DELQUA} = \beta_2 > 0$$

To test these hypotheses the research used the following econometric model.

LEVINF =	$\beta_0 + \beta_1 \text{FREPAR_L} + \beta_2 \text{DELQUA} + \beta_3 \text{ELEMEN} + \beta_4 \text{PRESID} + \beta_5 \text{BUREAU}$ $+ \beta_6 \text{INDMEN} + \beta_7 \text{INDAGE_L} + \beta_8 \text{INDEDU} - \beta_9 \text{INDSTC} + \beta_{10} \text{ELECAN} +$ $\beta_{11} \text{ASSPAR_L} + \beta_{12} \text{INFSOU_L} + \beta_{13} \text{HHOECO} + \beta_{14} \text{HHOAPA} + \beta_{15} \text{HHOS80} -$ $\beta_{16} \text{HHOBPL} + \beta_{17} \text{PANDEV} + \beta_{18} \text{PANASS_L} + \beta_{19} \text{INFPUB} + \varepsilon$
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In arriving at the other independent variables, the approach was to identify: other sources of information; political, social or economic opportunities to access them; and factors which enhance the cognitive capability to process them (see Sections 1.2, 1.3, 2.4.2, 6.1

and 6.2). Three vectors of independent variables, at the level of the individual, the household of the individual and the Panchayat were used. The data for variables at the level of the Panchayat were obtained from the Panchayat data set. Measurement of these variables and their descriptive statistics is provided in Chapter Five.

ELEMEM was the dummy for elected member, **PRESID** was the dummy for Panchayat President and **BUREAU** was the dummy for Panchayat Development Officer/ Panchayat secretary. Compared to the citizen participant (the reference category); the elected member, the President, and the bureaucrat, were expected to show a better level of information, because of their position, the level of engagement with the Panchayat's activities, and the opportunities it provides for accessing the information.

INDMEN was the dummy for the gender of the individual. Men were expected to have a better level of information as compared to women as they have better opportunities to access information. This is because women are still very much confined to their role in the private sphere of household, despite the reservation in political offices and their anticipated attendance in Panchayat meetings (Chhibber 2002). Even in instances where they attend the Panchayat meetings, their participation in deliberations is poor when compared to men (see Bryld 2001; Ghatak and Ghatak 2002).

INDAGE L was the natural log of the age in years of the individual. Age was used as a proxy for duration of residence in the village, as typically mobility of the people as in shifting residences from one village and to another is low. Higher the age higher will be the opportunities to interact with Panchayat and its processes, and hence better can be the level of information.

INDEDU was the education level of the individual. Higher education level was expected to be positively associated with the level of information due to better access to information and better cognitive capability to process that information.

INDSTC was the dummy to indicate whether individual belonged to Scheduled Caste or Scheduled Tribe. Previous studies suggest their participation in deliberations in Panchayat

meetings is lower when compared other groups (see Bryld 2001; Ghatak and Ghatak 2002). Also, individuals belonging to these groups are routinely marginalised in day to day social and economic activities (see Section 1.2.5). Because of these reduced opportunities they were expected to have lesser levels of information as compared to other groups.

ELECAN was the number of times the individual have canvassed in elections. Individuals who have canvassed more can have better information, as they are better incentivised to access information because of their political engagement (Alsop *et al* 2001).

ASSPAR_L was the natural log of the number of associational meetings attended by the individual. In rural settings, other than deliberative institutions of the Panchayat, associational meetings are the other main deliberative institutions which not only serve as a source of information but also provide an opportunity for collective exchange of each other's knowledge. Also, the routine functioning of these institutions is linked to that of Panchayats through grants / collaborative projects / through availing different public services of the Panchayat. This provides its members increased the opportunity to interact with the Panchayat and get to know about its functioning better. Because of these reasons participation in these meetings was expected to be associated with higher level of information.

INFSOU_L was the natural log of a number of different sources of information accessed by the individual to know about local affairs and is expected to be positively associated with the level of information (Alsop *et al* 2001).

HHOECO was the dummy to indicate whether any member of the individual's household had contested in elections. Individuals from such household have a better opportunity for political mobilizations and political engagement (Easton and Dennis 1967) and hence were expected to have a higher level of information.

HHOAPA was the dummy to indicate whether any member of the individual's household has participated in the associational meeting. Individuals from such households were expected to have better levels of information for reasons discussed under ASSPAR_L

HHOS80 was the proportion of the individual's household members educated at least up to high school level. Higher the proportion higher can be the level of information of individual from such households.

HHOBPL was the dummy to indicate whether the individual belongs to below poverty line (BPL) household. Individuals from poorer households have lesser opportunities to participate in society's activities, be it social, economic or political, due to their poor social status, poor social affiliations (see discussion under 1.2.5) and the opportunity cost of participation. Hence they were expected to have lower levels of information.

PANDEV was a factor score for number of public service organizations and extent of economic activities in the Panchayat. Most of the public service oriented Governmental Departments such as agriculture or primary health care or schools, work closely with Panchayat in implementing the development programmes. Also, these Departments typically have a number of programmes and initiatives to increase awareness of the people and to promote local participation in Panchayat meetings. All these provide better opportunities not only to know more about Panchayat's process but also to engage with them. The Panchayats with higher PANDEV scores because of semi-urban nature and higher economic activities can bring in the kind of awareness among its residents similar to the one seen in residents of bigger towns and cities. Hence due to these reasons PANDEV was expected to have a positive association with the level of information.

PANASS_L was the natural log of the number of associations per 1000 people in the Panchayat. For reasons discussed under ASSPAR_L it was expected to have a positive association with the level of information.

INFPUB was the factor score of information about Panchayat's programmes and operations displayed in public space and was expected to have a positive association with the level of information.

6.5 THE RESULTS

The level of Information structure, the dependent variable, was regressed on, the frequency of participation and quality of deliberation the hypothesised independent variables; and vectors of variables at the individual, household of the individual and panchayat levels, the other independent variables. The regression analysis was performed in Stata v.13 using complete observations in the individual data set ($n=373$).

Two models were used in regression analysis. In Model A, linearly aggregated level of information (LEVINF_A) was used as the dependent variable and in Model B, factor analytically derived the level of information (LEVFINF_F) was used as the dependent variable. Table 6.2 displays the regression results along with the correlational statistics and the goodness-of-fit measures. Rest of this section describes and discusses the results of Model A as it had the better goodness of fit measures.

In Model A³¹, R , the coefficient of multiple correlations was significantly different from zero with the goodness of fit measures: $F(19, 353) = 43.78$; $p < 0.001$, and R^2 of 0.70. With adjusted R^2 at 0.69, the model explained slightly more than two-thirds of the variation in the level of information.

The frequency of participation ($\beta = 0.29$, $p < 0.001$) and the quality of deliberation ($\beta = 0.08$, $p < 0.05$) showed significant positive association with the level of information. Hence these results failed to reject the hypotheses H1 and H2.

Among different categories of the respondents, as expected, elected member, President and the bureaucrat showed a higher level of information as compared to citizen participant, however, it was significant only in the instance of the bureaucrat ($\beta = 0.41$, $p < 0.001$).

Among individual level variables; contrary to expectation, the age and the gender did not show significant association with the level of information. To examine the association of

³¹ In regression results for model A; INF_SOU_L and PANDEV were sensitive to outliers in residuals and ELEMEM was sensitive to multivariate outliers.

gender further, an independent-samples t-test ($n=373$) was performed to compare the difference in levels of participation between men and women. There were no significant difference in levels of participation between men (mean=3.02; SD=0.72); and women (mean=3.10; SD=0.50); $t(371) = 1.03$; $p=0.31$). Similarly, the individuals belonging to Scheduled Caste/Scheduled Tribe (INDSTC), did not show significantly lower level of information. As expected, individuals, with higher educational level ($\beta=0.25$, $p<0.001$), those who participated more in associational meetings ($\beta=0.10$, $p<0.001$) and those who are politically better engaged ($\beta=0.10$, $p<0.05$) showed significantly higher levels of information. Contrary to expectation, the individuals' sources of information were not significantly associated with the level of information; possibly because it did not show much variation among different categories of the respondents.

Among the household level variables; the individuals from households, whose members had contested election or had participated in associational activities or of poorer economic status did not show significantly different levels of information. These variables were tested for joint significance, and results were not significant. Individuals from households with a higher proportion of members educated up to high school level ($\beta=0.07$, $p<0.05$) showed significantly higher level of information.

Among Panchayat level variables, as expected, a higher level of information about Panchayat's operations displayed in public spaces ($\beta=0.10$, $p<0.001$) was significantly associated with higher level of information.

6.6 THE DISCUSSION

This chapter using individual level data empirically tested the hypotheses that: at the individual participant level; higher frequency of participation in deliberative meetings of Panchayat, and higher quality of deliberation in these meetings are associated with higher level of information.

The results show that the individuals who attended a higher number of deliberative meetings of the Panchayat were significantly associated with higher levels of information,

and that, higher quality of deliberation in these meetings was also significantly associated with higher levels of information among participants.

One way to interpret the result is, the association of level of information with the frequency of participation suggest the availability of information in these meetings, whereas, the association of quality of deliberation, in addition, can possibly suggest increased accessibility of the information. These results substantiate the arguments made in chapter three (see Section 3.4) that deliberative meetings can be associated with better availability and accessibility of the information. This can be because of their requirement of giving in public, factual and accessible information on a preference, and the reasons to propose it / justify it / reject it. This increased availability and accessibility of information can make information structure of the participant more complete, possibly by addressing some of the reasons for incomplete information structure such as it being private good, bounded rationality, the cost of acquisition and the individual belief systems.

This interpretation finds support in the literature which has examined beneficial effects of deliberation. Avritzer (2000) showed, the public deliberation makes information on the distribution of public goods available and thereby increases access to these goods. Fearon (1998:46) argued public deliberation reveals preference, transforms information from private good to public good and thereby makes information as a common knowledge (see also Manin 1987, Cohen 1997:21-32). He explained (1998:49-52) deliberation by drawing on each other's knowledge, experience and capabilities, and with its additive and multiplicative attributes reduces boundedness of rationality. On similar lines Lindeman (2002:199) argued, collective brainstorming nature of deliberation, improves cognitive capability in forming, altering and reinforcing opinions by weighing evidence and arguments from various viewpoints. The requirement of publicity and repetitive nature of the process can reduce the transactional cost of acquiring the information (see North 1990:12).

Manin (1987) argued requirements of deliberation (see Sections 3.2 and 3.3) transforms irrational beliefs in the information structure to more fact-based beliefs, and eliminates

morally unacceptable and self-regarding preferences; thereby reduces conflicting and non-coherent preferences both within an individual and among individuals.

Panchayat bureaucrat's significantly higher level of information supports the proposition in Principal-agent theory that, agents have an inherent informational advantage over their principals (see Sections 9.1 and 9.2 for a full discussion). Also, non-significant differences in levels of information among other categories of respondents suggests possibly a more linear distribution of level of information among other participants. Absence of higher level of information in men as compared to women suggests, given the same opportunities as men to participate in public sphere, women can be comparable to men in their knowledge about Panchayat. This challenges the cultural belief which questions women's role and capability in public sphere (see Blyrd 2001; Jejeebhoy 2002). The higher level of information in individuals from better-educated household corroborates the finding of positive externality effect of education in the study on south Indian Panchayats by Besley *et al* (2005). Results also show that Individuals were not disadvantaged by their economic status or marginalised social group, in acquiring information. Finally, higher levels of information in individuals from Panchayats which displayed information about its operation in public place provide support for such initiatives both as a source of information and as a measure of transparency.

In summary, this chapter empirically showed that better participation in deliberative meetings of the Panchayat and better quality of deliberation in these meetings can be associated with better levels of information at the participant level. Possible explanation is deliberative participation can be associated with better availability of information, reduced cost of acquiring it, reduced bounded rationality in processing it due to better accessibility and reduced irrational non-coherent preferences and more of fact based preferences. All these can make information a common knowledge among the participants. This suggests such participants can better articulate their preference for local public health goods on one hand, and on the other, these articulated preferences can be more homogeneous.

Table 6.1: The list of Items Used to Measure the Level of Information Structure

No	Items	Measurement level	Mean	Factor loadings
1	In which year the Panchayat Raj Act was brought into force	Correct=1; wrong=0	0.52	0.85
2	In your opinion what are the main responsibilities of the Panchayat	Multi-select; Ordinal	0.54	0.08
3	Towards fulfilling these responsibilities; how should the Panchayat gather information on peoples' preferences?	Multi-select; Ordinal	0.50	0.47
4	How should the Panchayat publicize information about its services	Multi-select; Ordinal	0.38	0.47
5	Have you heard about Ward Sabha	Correct=1; wrong=0	0.98	dropped
6	Have you heard about Gram Sabha	Correct=1; wrong=0	1.00	dropped
7	What is the minimum number of times Ward Sabha should be convened in a year?	Correct=1; wrong=0	0.58	0.65
8	What is the minimum number of times Gram Sabha should be convened in a year?	Correct=1; wrong=0	0.67	0.60
9	Can all villagers participate in Ward Sabha?	Correct=1; wrong=0	0.98	dropped
10	Can all villagers participate in Gram Sabha?	Correct=1; wrong=0	0.99	dropped
11	What is the quorum requirement for convening Ward Sabha?	Correct=1; wrong=0	0.25	dropped
12	What is the quorum requirement for convening Gram Sabha?	Correct=1; wrong=0	0.42	0.43
13	What are the objectives of convening Gram Sabha?	Multi-select; Ordinal	0.43	0.61
14	What is your role in Gram Sabha?	Multi-select; Ordinal	0.37	0.55
15	Who all should mandatorily participate in Gram Sabha?	Multi-select; Ordinal	0.61	0.35

No	Items	Measurement level	Mean	Factor loadings
16	Have you heard of MGNREGA Gram Sabha	Correct=1; wrong=0	0.86	dropped
17	In which month of the year, MGNREGA Gram Sabha has to be convened	Correct=1; wrong=0	0.30	0.78
18	Have you heard of Samanya Sabha?	Correct=1; wrong=0	0.99	dropped
19	How many Samanya Sabha meetings have to be held in a year	Correct=1; wrong=0	0.81	0.82
20	Can villagers participate in Samanya Sabha meeting?	Correct=1; wrong=0	0.12	dropped
21	What is the quorum requirement for holding Samanya Sabha meeting?	Correct=1; wrong=0	0.72	0.69
22	Who are all required to mandatorily participate in Samanya Sabha meeting	Multi-select; Ordinal	0.96	0.68
23	Have you heard of production committee?	Correct=1; wrong=0	0.69	dropped
24	Have you heard of civic amenities committee	Correct=1; wrong=0	0.71	0.88
25	Have you heard of social justice committee	Correct=1; wrong=0	0.72	dropped
26	Which households are eligible for getting water taps from the Panchayat	Correct=1; wrong=0	0.90	dropped
27	Which households are eligible to get toilets from the Panchayat?	Correct=1; wrong=0	0.72	dropped
28	To get household water tap or toilet from the Panchayat, which is the most suitable place to submit the application	Correct=1; wrong=0	0.82	dropped
29	Where/who selects the beneficiaries to receive household water taps or toilets from the Panchayat	Correct=1; wrong=0	0.76	dropped
30	How much financial assistance is available from the Panchayat for household toilets	Correct=1; wrong=0	0.57	0.53
31	How much tax should be paid to the Panchayat every month for public water taps	Correct=1; wrong=0	0.36	0.50

No	Items	Measurement level	Mean	Factor loadings
32	Why Panchayat collects water tax	Correct=1; wrong=0	0.80	0.54
33	Whose primary responsibility it is to manage the garbage bin in your street	Correct=1; wrong=0	0.97	dropped
34	To decide on the location of the public taps which is the most suitable place	Correct=1; wrong=0	0.18	0.35
35	If there is a need for supply of water or toilet to your local school or child care centre, which is the most suitable place to give application for it	Correct=1; wrong=0	0.91	dropped
36	Who is responsible for daily management of water supply arrangement and toilets in your local school or child care centre	Correct=1; wrong=0	0.84	dropped
37	Who is responsible for daily management of garbage bin of your local school or child care centre	Correct=1; wrong=0	0.62	dropped
38	If there is problem in daily management of garbage bins in your local school/child care centre who/which is the most suitable person/place to discuss it with	Correct=1; wrong=0	0.75	dropped
39	Have you heard about MGNREGA social audit	Correct=1; wrong=0	0.71	dropped
40	Have you heard about Jama Bandhi social audit	Correct=1; wrong=0	0.80	dropped
41	Who formulates the Jama Bandhi team	Correct=1; wrong=0	0.47	0.81
42	In which period of the year should Jama Bandhi audit be conducted	Correct=1; wrong=0	0.29	dropped
43	Who are all mandatorily required to attend the Jama Bandhi social audit	Multi-select; Ordinal	0.62	0.84
44	What is the purpose of conducting Jama Bandhi social audit	Multi-select; Ordinal	0.36	dropped
45	Have you heard of Sakala	Correct=1; wrong=0	0.66	dropped
46	Who is the designated officer for Sakala in Panchayat	Correct=1; wrong=0	0.54	dropped

No	Items	Measureme nt level	Mean	Factor loadings
47	Who is the designated competent authority for Sakala	Correct=1; wrong=0	0.22	dropped
48	Who is the designated appellate authority for Sakala	Correct=1; wrong=0	0.03	dropped
49	What is the time limit for addressing grievance related to water supply in the village	Correct=1; wrong=0	0.31	0.82
50	What is the time limit for addressing grievance related to sanitation in the village	Correct=1; wrong=0	0.19	dropped
51	What is the time limit for addressing grievance related to street lights in the village	Correct=1; wrong=0	0.23	dropped
For variables with binary measurement, 'mean' column shows the proportion of the split.				

Table 6.2: The Results of Regression Analyses

Variable name	Model A (LEVINF_A)				Model B (LEVINF_F)	
	<i>r</i>	<i>pr</i>	β	<i>t</i>	β	<i>t</i>
FREPAR_L	0.66	0.28	0.29***	5.45	0.30***	5.28
DELQUA	0.27	0.13	0.08**	2.4	0.02	0.50
ELEMEN (Dummy)	-0.05	0.07	0.07	1.31	0.08	1.42
PRESID (Dummy)	-0.15	0.04	0.04	0.70	0.08	1.39
BUREAU (Dummy)	0.60	0.31	0.41***	6.19	0.35***	4.97
INDMEN (Dummy)	0.16	0.08	0.06	1.49	0.04	0.94
INDAGE_L	-0.04	-0.06	-0.03	-1.03	-0.04	-1.12
INDEDU	0.62	0.30	0.25***	5.81	0.27***	5.87
INDSTC (Dummy)	-0.12	-0.04	-0.03	-0.82	0.00	-0.09
ELECAN	-0.10	0.13	0.10**	2.51	0.11***	2.62
ASSPAR_L	0.15	0.15	0.10***	2.92	0.07*	1.91
INFSOU_L	0.24	0.07	0.04	1.33	0.12***	3.54
HHOECO (Dummy)	-0.05	0.03	0.02	0.62	0.02	0.56
HHOAPA (Dummy)	-0.01	-0.07	-0.04	-1.28	-0.04	-1.21
HHOS80	0.46	0.11	0.07**	2.05	0.05	1.36
HHOBPL (Dummy)	-0.42	-0.01	-0.01	-0.22	-0.03	-0.73
PANDEV	0.05	-0.05	-0.03	-0.94	-0.02	-0.58
PANASS_L	0.12	0.09	0.05*	1.67	0.06*	1.94
INF PUB	0.27	0.15	0.10***	2.82	0.07***	2.09
Constant	-	-	6.83 ¹	1.46	0.36 ¹	1.31
Adjusted R ²			0.69		0.64	
F-statistic			F(19, 353) = 43.78; p<0.001		F(19, 353) = 35.37; p<0.001	
n			373		373	
<i>r</i> :Pearson’s coefficient of linear correlation; <i>pr</i> : partial correlation coefficient; β :standardised regression coefficient; R ² : coefficient of determination; <i>t</i> : t-statistic; *** significant at ≤ 1 percent; ** significant at ≤ 5 percent; * significant at ≤ 10 percent; ¹ not standardised						
Descriptive statistics of: LEVINF_A: Minimum value 13.23; Maximum value 45.09; Mean 30.81; Standard Deviation 7.53 LEVINF_F: Minimum value 0.29; Maximum value 2.26; Mean 1.48; Standard Deviation 0.41						

CHAPTER 7: DELIBERATIVE PARTICIPATION AND POLITICAL EFFICACY

How can we account for the (political) inactivity of the average?

Giovanni Sartori

The previous chapter empirically showed that individuals who participated more frequently in deliberative meetings of the Panchayat were associated with higher levels of information about local public health goods, and hence can possibly better articulate their preferences for it.

Section 2.4.3 discussed in a collective action scenario, it is not enough if an individual has a preference; it needs to be communicated effectively in a louder voice to other participants. It also discussed, it is not just the total number of preferences that are communicated is important; where they are coming from and how representative are they of the preferences which exist in the community are also equally important. However, to communicate, the individuals need to perceive that their voice matters in arriving at the collective choice in a participatory setting having individuals from differing socio-economic statuses. This perception of mattering stems from their sense political efficacy.

Political efficacy is extensively used to study political behaviour in widely differing participatory situations ranging from schools, voting, protests, assemblies, campaigning to referendums; in different countries, using different methods and different measures (Finkel 1985, 1987; Bowler and Donovan 2002; Acock, Clarke and Stewart 1985; Acock and Clarke 1990; Ikeda, Kobayashi and Hoshimoto 2008; Caprara, Vecchione and Capanna 2009; Coleman and Davis 1976; Chamberlain 2012; Karaman 2004; Beaumont 2011). For instance, Fishkin and Luskin (1999) showed participation in National Issues Convention (NIC) was associated with increased political efficacy, political knowledge and greater trust in politicians. Gastil and Dillard (1999) showed participation in National Issues Forum (NIF) was associated with increased political efficacy.

This chapter examines how individuals' perceived sense of political efficacy can influence their effectiveness in communicating their preferences; and empirically tests the proposition that better deliberative participation is associated with better levels of internal

and external political efficacies, at the individual participant level. The chapter is structured as follows:

The first section explains how voice is linked to political efficacy. The second section explores the dimensions of political efficacy. The third section describes the strategy to measure these dimensions. The fourth section specifies the models to empirically test the proposed association. The fifth section describes the results of testing. The sixth section discusses the results and then concludes.

7.1 POLITICAL EFFICACY, VOICE AND PREFERENCE COMMUNICATION

Electoral mass is incapable of action other than a stampede
Joseph Schumpeter

In a collective choice scenario, the propensity of the individuals to communicate their articulated preference in loud and clear voice is a function of the self-perceived probability of their voice making a noticeable difference in arriving at the collective choice (Marwell and Oliver 1993; Colomer 2011; Couldry 2010:1-5; Section 2.3). Campbell, Gurin and Miller (1954:187), conceptualised this perception of mattering as political efficacy, a sense “that individual political action does have, or can have, an impact on the political process. ... (T)hat it is worthwhile to perform one’s civic duties ... that political change and social change is possible and that the individual citizen can play a part in bringing about this change”.

Since then, this concept has been widely used to study political behaviour in disciplines such as political sociology, political economics and political psychology using different phraseologies. For Milbrath (1965:59) it was personal effectiveness as in self-confidence in one’s dealings with the world; for Almond and Verba (1965:206-07) it was political attitude; for Easton and Dennis (1967) it was political socialisation; for Pateman (1970) it was political competence; for Mokken (1971:226) it was personal influence over the system and for Wright (1981:6) it was citizen’s sense of power to influence the action of the Government.

Bandura (1997:482-85) using insights from cognitive theories, social learning theories and empirical studies, linked origin of political efficacy to individual's sense of self-efficacy; a self-judgement of their ability to achieve the desired results through personal engagement, and efficient use of one's own capabilities and resources. He then explained self-efficacy in political situation manifests as political efficacy, a "belief that one can produce effects through political action (pp.483)". This belief affects individual's motivation, perseverance and resilience to obstacles in political situations (ibid).

The development of political efficacy in an individual, Eastman and Dennis (1967) explains, is facilitated by the opportunities for political socialisation, which shapes one's political attitudes, belief and values. They note, political socialisation, as part of the broader socialisation, starts very early in life through participation in family, social and school settings, and continue in adult life through participation in the workplace and in associations (for similar views see Verba *et al* 1965).

They also explain, higher socio-economic status provides better resources and better opportunities for socialisation, which in turn can lead to better political efficacy and louder voice (see Verba *et al* 1995:10-16). Pateman (1970:50) further explains those from lower socio-economic strata feel psychologically underprivileged. This results in low self-confidence, low political efficacy and feeble voice. This constrains their effectiveness in participatory situations, leading to domination of them and the situation, by those with better resources, better political efficacy and louder voice (See Young 2000 in Section 3.5).

As a result, more often than not collective preferences will be biased towards those who have better political efficacies and louder voices. For those with lower political efficacies and weaker voices, which are often not heard, the cost of participation will be higher than the benefit, leading to their exit from the collective choice situation (see also Sections 2.4.3 and 2.6).

In the context of Panchayats, empirical studies seem to validate this. For instance, Ban *et al* (2012) found, in Grama Sabha meetings, priority accorded to a preference increases with the increasing income and educational status of the individual proposing it and the

preference of the pivotal agent in many instances end up the as the final one (see Section 1.3.2.1).

7.2 POLITICAL EFFICACY: DIMENSIONS AND DETERMINANTS

Political efficacy was initially conceptualised as a one-dimensional concept by Campbell *et al* (1954). Later on, studies revealed it has two dimensions: internal and external, depending on the object of one's attitude. When self-competence is the attitude object it reflects internal political efficacy and when the system is the attitude object it reflects external political efficacy (Balch 1974).

Internal political efficacy (henceforth internal efficacy) is a self-perception about one's own competence to understand and to participate effectively in politics, whereas, external political efficacy (henceforth external efficacy) is the perceived responsiveness of the system/leaders/institutions, to individuals' needs and their attempts to influence its functioning (Balch 1974; Converse 1972; Craig and Maggiotta 1982:86).

The development of internal efficacy is determined more by social-cultural variables which influence the socio-economic status of the individuals and the opportunities for socialisation in general and political socialisation in specific. Development of external efficacy is determined more by contextual variables which influence broader socio-economic-political situation (Balch 1974; Craig and Maggiottio 1982; Karaman 2004) at the Panchayat level or higher.

The empirical studies suggest that internal and external efficacies are moderately correlated. However, there is considerable debate on which way the causal arrow is directed. Bandura (1997:483) argued to feel externally efficacious individuals' first need to have a sense of internal efficacy necessary to produce the results. The opportunities provided by the political institutions to exercise this internal efficacy and the institutional and situational constraints imposed while exercising it, determine individual's perception of responsiveness of institutions to their demands, and hence their external efficacy. Craig,

Niemi and Silver (1990) similarly argue that “beliefs about one's own competence help to shape beliefs about the potential ... to play a meaningful role in political decision making”.

In contrast, Coleman and Davis (1976:190-92) notes external efficacy might be seen as a facilitating, but not sufficient condition for the existence of internal efficacy. They explain if a system is responsive it may make the individual to believe that they have the competence to be effective and hence feel internally efficacious. Whereas if a system is less responsive individual may feel it is their inability to be effective and hence feel internally less efficacious. They conclude by noting, a responsive system makes a person feel externally efficacious, this increases their political attentiveness and political involvement, and this, in turn, leads to higher internal efficacy.

Madsen (1987) in his analysis of national sample survey data of India of 1967 found successful petitioners view themselves as politically self-efficacious and unsuccessful petitioners view Government as distinctly unresponsiveness. Miller (1979) argued that without the perception of ability to influence political situations individuals cannot be expected to develop personal competency. However, Bandura (1997:482-85) citing empirical evidence cautions, perceptions about the system are determined more by subjective beliefs about it rather than by its objective properties.

The literature is rather inconclusive on how stable these perceptions are in a given individual. Schulz (2005) in his review of studies on political efficacy, observes, some studies find both internal and external efficacies as fairly stable over time, whereas, some other find internal efficacy to be comparably more stable over time. Possible reason for latter could be determinants of internal efficacy such as political socialisation starts fairly early in life, whereas, external efficacy determined more by the current situation which can be transient (see Easton and Dennis 1967; Finkel 1985). However, Nabatchi (2007) in her empirical study found external efficacy persisted for a longer time than internal efficacy.

7.3 MEASURING THE INTERNAL AND THE EXTERNAL POLITICAL EFFICACIES

Campbell, Gurin and Miller (1954) measured political efficacy as a one-dimensional concept, initially with 4 items and later on expanded it to 6 items. Since then there have been a number of efforts to improve its validity and to delineate the internal and external efficacies. For a historical review of these efforts see Morrell (2003).

Political efficacy as a concept has been studied in the Indian context largely in an exploratory (Madsen 1973; Vir 1989; Roy 2014) and descriptive (Atal 1969; Malik 1979; Srivastava 1989; Kapoor 2014) manner. Studies such as by Iyengar (1980) among school children and by Madsen (1987) among petitioners, did try to empirically measure political efficacy, however, they did not differentiate between internal and external efficacies.

One of the most widely used scale for measuring internal and external efficacies is the one developed by Niemi, Craig and Mattei (1991) and Craig, Niemi and Silver (1990). This scale of eight items has been tested for reliability and external validity both by the developers and by others (Morrell 2003). This research adopted this scale and changed the context in the items from 'country' to 'Panchayat'. The list of eight items is provided in table 7.1. In addition, one more item, about seeking the opinion of the local people (Item number 9 in Table 7.1), was adopted from the scale used by Karaman (2004) in measuring political efficacy in Russians. The responses to these nine items were measured on a scale of 1(strongly disagree) to 5 (strongly agree).

The 9 items in the individual data set with a sample size of 373 complete cases were used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. Following this, principal factor extraction was performed with oblique oblimin rotation. This yielded two factors with an Eigenvalue >1. The first factor explained 70% of the variance and the second factor explained 45% of the variance. Both the factors were well defined with all the items loading at >0.32, except item number 5 which showed strong loading into first two factors. Nimei *et al* (1991) also report the similar behaviour of item number 5 in their study.

The Bartlett's test of sphericity was significant ($p < 0.001$) and the Kaiser-Meyer-Olkin (KMO) test value was 0.67. The first factor was interpreted as external efficacy (EXTEFF) and the second factor was interpreted as internal efficacy (INTEFF) and both were extracted.

Items loadings into EXTEFF and INTEFF showed average Squared Multiple Correlation (SMC) of 0.35 and 0.26 respectively, and average communality of 0.46 and 0.34 respectively. Possible reasons for low SMC and communality could be the small number of items (see Tabachnick and Fidell 2013: 696). Both factors showed mild correlation ($r = 0.18$) as expected, however, slightly less than what is reported in the literature which ranged from 0.26 (Morrell 2003) to 0.34 (Coleman and Davis 1976)³². The variable INTEFF had two outliers with a z score of $\geq |3.29|$. However, the results were not sensitive to the outliers. The items loading into EXTEFF and INTEFF exhibited internal consistency with a Cronbach's Alpha of 0.66 and 0.60 respectively.

7.4 THE MODELS TO TEST THE PROPOSITION

In Chapter Three this research proposed that, at the individual participant level, better deliberative participation is associated with better internal political efficacy, and better external political efficacy; and now, states it in the form of following hypotheses to empirically test them:

H1: *At the individual participant level, higher the frequency of participation in deliberative meetings of the Panchayat (FREPAR), higher is their level of internal efficacy (INTEFF)*

$$\delta \text{ INTEFF} / \delta \text{ FREPAR} = \alpha_1 > 0 \text{ (Model A)}$$

H2: *At the individual participant level, higher the quality of deliberation in deliberative meetings of the Panchayat (DELQUA), higher is their level of internal efficacy (INTEFF)*

$$\delta \text{ INTEFF} / \delta \text{ DELQUA} = \alpha_2 > 0 \text{ (Model A)}$$

³² It should be noted that these studies used different measures of internal and external efficacies

H3: At the individual participant level, higher the frequency of participation in deliberative meetings of the Panchayat (FREPAR), higher is their level of external efficacy (EXTEFF)

$$\delta \text{ EXTEFF} / \delta \text{ FREPAR} = \beta_1 > 0 \text{ (Model B)}$$

H4: At the individual participant level, higher the quality of deliberation in deliberative meetings of the Panchayat (DELQUA), higher is their level of external efficacy (EXTEFF)

$$\delta \text{ EXTEFF} / \delta \text{ DELQUA} = \beta_2 > 0 \text{ (Model B)}$$

To test these hypotheses the research used the following econometric model.

Model A	
INTEFF=	$\alpha_0 + \alpha_1 \text{FREPAR_L} + \alpha_2 \text{DELQUA} + \alpha_3 \text{ELEMEN} + \alpha_4 \text{PRESID} + \alpha_5 \text{BUREAU} + \alpha_6 \text{INDMEN} + \alpha_7 \text{INDAGE_L} + \alpha_8 \text{INDEDU} - \alpha_9 \text{INDSTC} + \alpha_{10} \text{ELECAN} + \alpha_{11} \text{ASSPAR_L} + \alpha_{12} \text{INFSOU_L} + \alpha_{13} \text{LEVINF_A} + \alpha_{14} \text{HHOECO} + \alpha_{15} \text{HHOS80} - \alpha_{16} \text{HHOBPL} + \alpha_{17} \text{PANDEV} + \alpha_{18} \text{PANASS_L} - \alpha_{19} \text{PANSTC} - \alpha_{20} \text{PAMBPL} + \alpha_{21} \text{PANBLT} + \alpha_{22} \text{CASNUM} + \alpha_{23} \text{EXTEFF} + \varepsilon$
Model B	
EXTEFF=	$\beta_0 + \beta_1 \text{FREPAR_L} + \beta_2 \text{DELQUA} + \beta_3 \text{ELEMEN} + \beta_4 \text{PRESID} + \beta_5 \text{BUREAU} + \beta_6 \text{INDMEN} + \beta_7 \text{INDAGE_L} + \beta_8 \text{INDEDU} - \beta_9 \text{INDSTC} + \beta_{10} \text{ELECAN} + \beta_{11} \text{ASSPAR_L} + \beta_{12} \text{INFSOU_L} + \beta_{13} \text{LEVINF_A} + \beta_{14} \text{HHOECO} + \beta_{15} \text{HHOS80} + \beta_{16} \text{HHOBPL} + \beta_{17} \text{PANDEV} + \beta_{18} \text{PANASS_L} - \beta_{19} \text{PANSTC} - \beta_{20} \text{PAMBPL} + \beta_{21} \text{PANBLT} + \beta_{22} \text{CASNUM} + \beta_{23} \text{INTEFF} + \varepsilon$

Informed by the discussions in earlier sections, three vectors of other independent variables, at the individual, household of the individual and Panchayat levels, were used. Data for variables at the level of Panchayat were obtained from Panchayat data set. Chapter Five provides the measurement and descriptive statistics of these variables. As discussed in Section 7.2, variables at the individual and household level were expected to have higher influence with internal efficacy, whereas, variables at the Panchayat level are expected to have a higher influence on external efficacy.

ELEMEN was the dummy for elected member, **PRESID** was the dummy for Panchayat President and **BUREAU** was the dummy for Panchayat Development Officer/Panchayat secretary. As compared to the citizen participant (the reference category); the elected member, the President and the bureaucrat were expected to have higher levels of internal and external efficacies, because of increased opportunities for political participation and political socialisation as official functionaries of the Panchayat.

INDMEN was the dummy for the gender of the individual. The prevalent cultural notion confines women's role to the private sphere of household, and day to day social, economic and political activities are dominated by men (see Section 6.4). Hence, men were expected to have higher levels of internal efficacy.

INDAGE L was the natural log of the age in years of the individual. Literature is rather inconclusive about the influence of age on political efficacy. On one hand increasing age can provide more opportunities for political socialisation, while, on the other, it can generate cynicism about an unresponsive system. Karamon (2004) in her study found that age showed a non-significant negative association with both internal and external efficacies.

INDEDU was the education level of the individual. The level of educational is both a primary constituent and an important determinant of other constituents of socio-economic status of the individual. Also, education improves cognitive capabilities, general awareness, and opportunities for political and other forms of socialisation. Hence individuals with higher levels of education were expected to have higher levels of internal efficacy.

INDSTC was the dummy to indicate whether the individual belonged to Scheduled Caste or Scheduled Tribe. As members of disadvantaged and marginalised groups in the society, they were expected to have lower levels of internal and external efficacies.

ELECAN was the number of times individual has canvassed in elections, and **ASSPAR L** was the natural log of the number of associational meetings attended by the individual in the

last one year. Both offer increased opportunities for political engagement and socialization and were expected to have a positive association with internal efficacy.

INFSOU_L was the natural log of the number of different sources of information used by the individual, and **LEVINF_A** was the level of the information structure of the individual about local public health goods. Information is an agent of political socialisation (see Glass, Bengtson and Dunham 1986), and a prime determinant of internal efficacy (Nie, Powell and Prewitt 1969:812).

HHOECO was the dummy to indicate whether any member of the individual's household had contested in elections and **HHOS80** was the proportion of the individual's household members educated at least up to high school level. For reasons discussed earlier both were expected to have a positive association with internal efficacy.

HHOBPL was the dummy to indicate whether individual belongs to below poverty line (BPL) household, and was expected to have a negative association with internal efficacy.

PANDEV was the factor score of number of public service organizations and extent of economic activities in the Panchayat. Lassen and Serritzlew (2011) has empirically shown larger jurisdiction of Local Governments were causally associated with lower levels of internal efficacy.

PANASS_L was the natural log of the number of associations per 1000 people in the Panchayat. Putnam (1993) in his seminal study showed local associational activities inculcate among citizens the kind of civic culture necessary for effective local governance. Hence, it was expected to have a positive association with external efficacy.

PANSTC was the proportion of Panchayat population belonging to Scheduled Caste and Scheduled Tribe. Bardhan and Mookherjee (2004) empirically showed, higher the proportion of disadvantaged groups in the community lower was the levels of responsiveness of the Panchayats. Hence it was expected to have a negative association with external efficacy.

PANBPL was the proportion of Panchayat household categorized as below poverty line, and for reasons discussed earlier, was expected to have a negative association with external efficacy.

PANBLT was the average literacy rate at the block level. As higher literacy rate is generally associated with better socio-economic conditions and because it has a positive externality, it was expected to have a positive association with internal and external political efficacies.

CASNUM was the number of different social groups in the Panchayat. Besley *et al* (2005) notes, homogeneity in terms of caste can lead to political dominance by the majority caste, leading to accountability issues such as clientelism. Sunstein (2002) observes heterogeneity in participatory situations can reduce polarisation of views/opinions. On this basis higher number of social groups should improve the responsiveness of the Panchayat and hence external efficacy.

7.5 THE RESULTS

Two separate standard multivariate regressions were performed using Internal efficacy (Model A) and external efficacy (Model B) as the dependent variables. In both the models, frequency of participation and quality of deliberation were the hypothesised independent variables, and vectors of variables at the individual, household and Panchayat level were other independent variables. The analysis was performed in Stata v.13 using complete observations in the individual data set ($n=373$). Table 7.2 displays the regression results for these models along with the correlational statistics and the goodness-of-fit measures.

In both the models, R , the coefficient of multiple correlations was significantly different from zero. The Model A³³ (Adj R^2 0.21) explained one-fifth of the variation in Internal

³³ In regression results for Model A (INTEFF); INDEDU was sensitive to outliers in residuals; BUREAU and INDAGE_L was sensitive to high leverage scores; DELQUA, INDEDU, HHOECO and CASNUM were sensitive to multivariate outliers; INDSTC was sensitive to adjusting standard error to clustering effect at the district level.

efficacy, whereas, the Model B³⁴ (Adj R² 0.30) explained nearly one-third of the variance in external efficacy.

In Model A, the frequency of participation ($\beta=0.00$, $p=0.97$) and quality of deliberation ($\beta=0.05$, $p=0.34$) did not show significant association with internal efficacy. These results reject the hypotheses H1 and H2 respectively.

In Model B, the frequency of participation ($\beta=0.16$, $p<0.05$) and quality of deliberation ($\beta=0.28$, $p<0.001$) showed significant positive association with external efficacy. Hence these results fail to reject the hypotheses H3 and H4 respectively. However, association with frequency of participation was sensitive to high leverage scores.

Among different categories of respondents; contrary to expectation, elected member and the President did not show significantly higher level of internal or external efficacies as compared to the citizen participant, the reference category. Though bureaucrat did show significantly higher levels of internal efficacy in comparison to citizen participant, the effect was mediated by level of information. The level of information was significantly associated with internal efficacy ($\beta=0.24$, $p<0.001$). Bureaucrat and level of information jointly showed significant positive association with internal efficacy ($F(2,349) = 6.89$; $p<0.001$).

Among individual level variables, men ($\beta=0.17$, $p<0.01$), and those who are older ($\beta=0.11$, $p<0.05$) showed significantly higher level of internal efficacy. However, contrary to expectation, individuals with higher levels of education did not show a higher level of internal efficacy. Individual with higher levels of political engagement or higher levels of associational activities or those belonging to the disadvantaged group also did not show any significantly different levels of internal efficacy. However, individuals who accessed different sources of information ($\beta=0.14$, $p<0.001$) did show significantly higher level of internal efficacy. None of the individual level variables showed any significant association with external efficacy.

³⁴ In regression results for Model B (EXTEFF); PANBLT was sensitive to its outliers; ELEMEN HHOBPL PANBLT were sensitive to outliers in residuals; FREPAR_AL was sensitive to high leverage scores; ELEMEN, PRESID, HHOS80, HHOBPL and PANBLT were sensitive to multivariate outliers; HHOS80 PANBLT were sensitive to adjusting standard error to clustering effect at the district level.

Among the household level variables, individuals from households where members have contested elections, or from poorer households or from a household with better-educated members did not show any significant difference in levels of internal and external efficacies, as compared to others.

Among Panchayat level variables, none of the variables showed any significant association with internal efficacy, with the exception of average literacy rate at the block level ($\beta = -0.19$, $p < 0.01$) which rather unexpectedly showed significant negative association with internal efficacy. However, the latter result needs to be interpreted with caution as literacy rate is measured at the block level.

Individuals from Panchayats with a larger number of associations per 1,000 population ($\beta = -0.11$, $p < 0.05$), contrary to expectation, showed significantly lower levels of external efficacy. Individuals from Panchayats having a higher proportion of Scheduled Caste and Scheduled Tribe ($\beta = -0.12$, $p < 0.05$) showed significantly lower levels of external efficacy, as expected. However, contrary to expectation, such a result was not seen in individuals from Panchayats having a higher proportion of poorer households. As expected, individuals from Panchayats having a higher number of social groups ($\beta = 0.15$, $p < 0.001$) showed significantly higher levels of external efficacy.

7.6 THE DISCUSSION

This chapter using individual level data empirically tested the hypotheses that: higher frequency of participation in deliberative meetings of Panchayat, and higher quality of deliberation in these meetings are associated with higher level of internal and external efficacies, at the individual participant level.

The results show that the frequency of participation and the quality of deliberation were not significantly associated with internal efficacy of the participant. This result is similar to the ones got by Morell (2003, 2005) and Nabatchi (2007) in their empirical study. Nabatchi attributed it to possible measurement errors.

In this study, internal efficacy showed the expected association with many other independent variables and hence measurement error may not be the reason. Another reason could be internal efficacy is more a subjective rather than objective assessment of the situation as suggested by Bandura (1997). Also, it can be a function of an individual's basic organismic urge to be in control of things, which is independent of the immediate environment (see Balch 1974:3). However, this needs further research for better understanding

The result that individuals, with higher levels of information and those who accessed different sources of information showed significantly higher levels of internal efficacy, supports the findings in the literature that information is one of the key determinants of internal efficacy (see Nie *et al* 1969:812; Balch 1974).

Results also show that, the individual who attended a higher number of deliberative meetings of the Panchayat were significantly associated with higher level of external efficacy and that, higher quality of deliberation in these meetings was significantly associated with higher level of external efficacy among participants. However, association with frequency of participation in meetings was sensitive to high leverage scores.

This result of the association of deliberation with external efficacy corroborates similar findings reported in the literature. Heller *et al* (2007) found, better participation in Grama Sabhas was associated with better responsiveness in elected members and bureaucrats. Berry, Portney, and Thomson (1993) in their analysis of participants of direct democracy in American cities found, face to face participation causally improves external efficacy as compared to internal efficacy (cited in Morrell 2005). Nabatchi (2007) in her quasi-experimental study involving participants of 21st Century Town Hall Meeting in America reports, ex-ante participants had a lower level of external efficacy than non-participant, and ex-post, participation had no effect on internal efficacy, however, improved external efficacy. Finkel (1985:893) based on his analysis of panel data on electoral participation in America, argued, participation improves external efficacy, as it promotes popular acquiescence to current authorities, a feeling of legitimacy for the system, and induces

citizens to believe that, Government is responsive to their needs and they ultimately control the actions of the Government³⁵.

The result of the association of deliberation with external efficacy also supports the arguments made in both participatory and deliberative theories on democracy.

Pateman (1970:41-50) while outlining the theory of democratic participation, argued, purpose of participation is also educative, “educative in the very widest sense, including both the psychological aspect and the gaining of practice in democratic skills and procedures” (pp.42), leading to responsible social and political action by the participants. She then explains the psychological effect as “the belief that one can be self-governing, and confidence in one's ability to participate responsibly and effectively, to control one's life and environment” (pp.46).

The norms of deliberative participation require, equality of opportunities: to participate, to propose preferences and to deliberate on others’ preferences in a non-dominant manner; all major preferences in the community to be communicated and considered; strength of the reason as the criteria for considering the preference rather than who made it or how many; respect for opposing views; equal rights in collective decision; and that these deliberations happen in public sphere in an accountable manner where the talk is credibly linked to outcomes, which have a common good orientation (see Section 3.3).

Deliberative setting by promoting, giving reasons, considering reasons, deciding based on reasons and using reasons to connect one’s action and its outcome; can be associated with improved discursive skills, communication skills, sense of self-efficacy, political knowledge and political competence (see Section 3.4).

In deliberative meetings of the Panchayat which have elected members, bureaucrats and local citizens with differing socio-economic resources, capabilities and statuses; observance of these deliberative norms can improve, not only participant’s democratic

³⁵ It should be noted that all the empirical studies cited in this section have used different measures of internal and external efficacies. This renders direct comparison of studies difficult.

skills³⁶ but also, civic integrity and civic management in the conduct of powerful actors such as its President or its bureaucrats. The latter can be perceived as responsiveness by the citizens to their demands and to their efforts to influence Panchayat's functioning. This can improve their perception of mattering, and thereby engage more evenly in such contexts and communicate their preferences more effectively.

Significant association of, many of the individual level variables with internal efficacy, and many of panchayat level variables with external efficacy supports the findings of the earlier studies, that immediate social-cultural variables shape development of internal efficacy (Balch 1974; Easton and Dennis 1967), whereas, broader socio-economic-political variables shape development of external efficacy (Karaman 2004).

In summary, this chapter has empirically shown that better deliberation in meetings of the Panchayat can be associated with higher levels of external political efficacy. Possible explanation is, observance of deliberative norms such as equality, non-dominance, requiring reasons to propose/justify/reject preferences than who or how many made it, and linking actions to outcomes which are of common good in nature; can be associated with improved discursive and communication skills on one hand, and better political knowledge and competence, on the other. These can improve the efficacious feeling that the Panchayat is responsive to one's needs and one's efforts to influence its functioning. This feeling can improve the confidence and the capability of the individuals to participate evenly in contexts having participants from differing socio-economic statuses and their propensity to communicate their articulated preferences effectively in a louder voice.

³⁶ Barber (1984) argues that such strong democracy promotes skills such as articulation of interests, bargaining, persuasion, agenda-setting, exploring mutuality, affiliation and affection, reformulation, reconceptualization, art of listening and community building as in creation of public interests and common goods.

Table 7.1: The list of Items Used to Measure the Internal and the External Political Efficacies

	Items	Mean	SD	External Efficacy	Internal Efficacy
Internal Political Efficacy					
1	You consider yourself well qualified to participate in affairs of the Panchayat	4.24	0.80	-0.02	0.76
2	You can do as good a job in managing affairs of the Panchayat as most others	4.18	0.87	0.15	0.67
3	You feel you have a pretty good understanding of the important issues facing the Panchayat	4.10	0.79	0.00	0.65
4	You feel you are well informed about affairs of the Panchayat than most others	3.22	1.17	-0.12	0.72
5	Sometimes affairs of the Panchayat seem so complicated that a person like you can't really understand what's going on	2.85	1.39	0.39	0.40
External Political Efficacy					
6	People like you don't have any say about what the Panchayat does	3.84	1.15	0.71	0.06
7	The Panchayat elected members and officials do not care what people like you think	3.82	1.19	0.79	0.05
8	The Panchayat elected members are only interested in people's votes and their own personal gains	3.70	1.43	0.65	-0.26
9	In your opinion, do you feel when the Panchayat elected members and officials take community-related decisions, they do not consider opinions of local people	3.91	1.07	0.69	0.04

Table 7.2: The Results of Regression Analysis

Variable name	Model A (INTEFF)				Model B (EXTEFF)			
	<i>r</i>	<i>pr</i>	β	<i>t</i>	<i>r</i>	<i>pr</i>	β	<i>t</i>
FREPAR_L	0.24	0.00	0.00	-0.03	0.42	0.11	0.16**	2.02
DELQUA	0.13	0.05	0.05	0.96	0.41	0.29	0.28***	5.61
ELEMEN (Dummy)	-0.07	0.00	0.00	-0.09	0.09	0.10	0.14*	1.94
PRESID (Dummy)	-0.08	0.04	0.06	0.73	0.15	0.10	0.15*	1.86
BUREAU (Dummy)	0.31	0.07	0.15	1.37	0.05	0.04	0.06	0.57
INDMEN (Dummy)	0.23	0.15	0.17***	2.90	-0.09	-0.04	-0.04	-0.67
INDAGE_L	0.09	0.11	0.11**	2.04	0.00	-0.03	-0.03	-0.57
INDEDU	0.26	0.05	0.06	0.77	0.09	-0.04	-0.05	-0.80
INDSTC (Dummy)	0.01	0.07	0.07	1.38	-0.07	-0.01	-0.01	-0.12
ELECAN	-0.05	0.03	0.04	0.56	0.15	0.04	0.04	0.70
ASSPAR_L	0.02	-0.01	-0.01	-0.10	0.20	0.05	0.05	1.01
INFSOU_L	0.26	0.15	0.14***	2.85	0.02	-0.02	-0.02	-0.44
HHOECO (Dummy)	0.02	0.04	0.04	0.84	-0.01	0.00	0.00	0.03
HHOS80	0.17	-0.04	-0.04	-0.69	0.15	0.09	0.10*	1.74
HHOBPL (Dummy)	-0.15	0.06	0.06	1.09	-0.04	0.07	0.07	1.35
PANDEV	-0.02	-0.01	-0.01	-0.25	0.05	0.02	-0.02	-0.32
PANASS_L	0.01	0.09	0.09	1.63	0.03	-0.11	-0.11**	-2.16
PANSTC	-0.01	0.00	0.00	-0.01	-0.21	-0.12	-0.12**	-2.31
PANBPL	0.01	-0.01	0.01	0.26	0.00	0.02	0.02	0.33
PANBLT	-0.06	-0.15	-0.19***	-2.98	0.27	0.09	0.10*	1.65
CASNUM	-0.03	-0.07	-0.08	-1.45	0.07	0.17	0.15***	3.13
EXTEFF	0.18	0.13	0.14**	2.50	-	-	-	-
INTEFF	-	-	-	-	0.18	0.13	0.12**	2.50
LEVINF_A	0.36	0.15	0.24***	2.80	0.30	0.04	0.05	0.66
Constant ¹	-	-	1.95**	2.49	-	-	-0.49	-0.49
Adjusted R ²	0.21				0.30			
F-statistic	F(23, 349) = 5.34; p<0.001				F(23, 349) = 8.04; p<0.001			
n	373				373			
<i>r</i> :Pearson’s coefficient of linear correlation; <i>pr</i> : partial correlation coefficient; β :standardised regression coefficient; R ² : coefficient of determination; <i>t</i> : t-statistic; *** significant at ≤ 1 percent; ** significant at ≤ 5 percent; * significant at ≤ 10 percent; ¹ not standardised β								
Descriptive statistics of: INTEFF: Minimum value 1.97; Maximum value 6.17; Mean 4.51; Standard Deviation 0.73 EXTEFF: Minimum value 1.70; Maximum value 6.21; Mean 4.63; Standard Deviation 0.99								

CHAPTER 8: DELIBERATIVE PARTICIPATION AND SENSE OF COMMUNITY

The previous two chapters empirically showed, higher frequency of participation in deliberative meetings of the Panchayat was associated with better levels of information; and higher quality of deliberation in these meetings were associated higher levels of information and higher external political efficacy, among participants. This suggests these participants can better articulate and communicate their preferences for local public health goods in collective action settings.

The section 2.4.4 discussed after articulation and communication, the next step is to identify the most common of these preferences such that it benefits the largest section of the community. It further discussed, given the nature of the local public health goods, this requires sustained collective action. Achieving and sustaining collective action face two specific challenges in the context of local public health goods. First, the non-excludable attribute of the goods can incentivise opportunistic behaviour in individuals such as free-riding on others' efforts. Second, heterogeneity among individuals in terms of needs, concerns, cultural values and socio-economic resources can lead to non-convergence of the communicated preferences.

However, collective action is pervasive in our social life and people do participate in them (Marwell and Oliver 1993:6) Empirical studies, both lab-based and field-based, demonstrate groups do achieve co-operation and co-ordination necessary for collective action, in a wide variety of settings, though the extent and sustenance may vary (Poteete and Ostrom 2004:436).

There is rich body of literature involving disciplines such as politics, economics, sociology, philosophy and psychology; drawing inspiration from diverse set of theories such as game theories (Hardin 1982), new institutionalism (Ostrom 2005) and social exchange (Coleman 1986,1988) and using constructs such as critical mass (Marwell and Oliver 1993), collective efficacy (Bandura 1997), joint commitment (Gilbert 1989), collective intentionality (Searle 2002), reciprocity/trust (Ostrom and Walker 2003), altruism (Margolis 1982) and institutions (North 1990) to explain mechanism of collective action.

A closer examination of these theories and constructs suggests, achieving and sustaining collective action requires an institutional mechanism which facilitates development among participants of co-operative goals and coordinated strategies to find mutuality in each other's needs (see Saavedra, Earley and Van Dyne 1993). In other words, a mechanism, which promotes broader common good solidary/purposive motives, over narrower self-seeking material motives.

In a community, the degree of cooperation and coordination achieved depends on the extent to which there is a willingness, to understand each other's concerns and socio-cultural values (Kiser and Ostrom 1982) and to intervene on behalf of the common good of the community (Sampson *et al* 1997). Such a shared understanding provides a common base for arriving at the collective preferences (ibid). Such a convergence, termed as social cohesion, is operationalised as psychological sense of community (Perkins *et al* 1990; Sampson *et al* 1997; Glynn 1981, Buckner 1988).

The Psychological sense of community (henceforth sense of community) is widely used to measure quality of character of relationship, at both individual level and at the community level; at both geographical level such as in neighbourhood and at relational level such as at workplace or school; using quantitative and qualitative designs; and in different polities (Chipuer and Pretty 1999; Fisher, Sonn and Bishop 2002; SCP 2004; Perkins and Long 2002:294-295).

This chapter examines how individual's sense of community can influence their ability to collectivise the communicated preferences through sustained collective action; and empirically tests the proposition that, at the individual participant level, better deliberative participation is associated with a better sense of community. The chapter is structured as follows:

The first section discusses how free riding and heterogeneity may impede collective action. The second section explains the sense of community, its dimensions and their determinants. The third section describes the strategy to measure the sense of community. The fourth section specifies the model to empirically test the proposed

association. The fifth section describes the results of testing. The sixth section discusses the results and then concludes.

8.1 FREE RIDING, HETEROGENEITY AND COLLECTIVISATION OF PREFERENCES

Informed by the group theory of politics, it was assumed to be rational, for members of a community with a common interest, to collectively participate to further their interest (Hardin 1982:2). In other words, community rationality was assumed to be a simple aggregate of individual rationality. However, Olson (1965) convincingly dispelled this proposition by persuasively arguing that “the existence of a common interest need not provide any incentive for an individual action in the group interest”. He went on to assert “rational self-interested individuals will not act to achieve their common or group interests” especially in conditions in which groups are large, public goods are non-excludable and the private cost is relatively high; and this was lamented by Garrett Hardin in his seminal article, the tragedy of commons (1968).

The private costs referred by Olson are the transactional costs, which an individual may incur for participation, articulation, communication and collectivising preferences in a collective action situation. However, the benefits of the collective action, the local public health goods, are essentially social. This scenario of private costs and social benefits creates positive externality to individual’s decision to participate, thereby creating a social dilemma.

A rational individual unwilling to internalise this externality, not only decides not to participate but prefers to free ride on the efforts of the others, as local public health goods once provided are difficult to exclude anyone from using it (see Section 2.4.1). In other words, there is a divergence of individual rationality from community rationality (Bandiera, Barankay and Rasul 2005). When more and more individuals decide to free ride on efforts of others, lesser will be the individuals belief in community’s conjoint capability to organise and execute a course of action required for sustaining collective action (Bandura 1997:477) and thinner will be the participation in collective action (see Sections 2.4.4 and 2.6).

Heterogeneity among individuals can further complicate this situation. The Heterogeneity can arise due to inequality in endowments, political and social connections, wealth, entitlements, cultural factors (Vedeld 2000; see also Marmot 2005). It seems intuitive that individuals in a heterogeneous community may have different bases for arriving at their preferences, different affinities with each other and different values about sharing benefit and costs (see Bandiera *et al* 2005). These can render the collective preference multi-peaked on one hand and on the other can impede the development of cooperative goals and coordinated strategies.

However, empirical literature is rather inconclusive about effects of heterogeneity (see Agrawal and Gibson 2001; Poteete and Ostrom 2004; Alesina and La Ferrara 2000; Marwell and Oliver 1993). Poteete *et al* (2004) conclude their excellent discussion on heterogeneity by observing inconclusive findings in literature might be due to different forms of collective action, lack of consensus on how heterogeneity is conceptualised and the interplay between different forms of heterogeneity (see also Coleman 1990:229). One explanation is, if different forms of heterogeneity are complementary to each other in achieving collective outcome then it aids collective action and if they are competitive then it impedes collective action (Quiggin 1993).

For instance, in a Panchayat, to improve village sanitation, the school teacher (higher education) can provide technical assistance, the Panchayat President (higher social status/affiliations) can provide access to his network resources and the Panchayat bureaucrat (higher level of information) can secure necessary grants from the Government.

8.2 SENSE OF COMMUNITY: DIMENSIONS AND DETERMINANTS

The community as a collective of individuals can be understood from two perspectives: the territorial and the relational (Gusfield 1975: xvi). The relational perspective focuses on the common interests, quality of character of relationship and the experiences within the community rather than its structure, strata, location or setting (see Rawls (1999) in Section 2.1).

Sarason (1974:155) conceptualised the relational perspective as psychological sense of community (henceforth sense of community) and described it as “a perception of similarity to others, an acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them and the feeling that one is part of a larger dependable and stable structure”.

Since then several studies have tried to define the dimensions of sense of community. For instance, Buckner (1988) considered belongingness, fellowship, ‘we’-ness and identity, whereas, Glynn (1981) identified homogeneity, face to face interactions, shared goals and interdependence; as dimensions in their models.

One of the most widely accepted and followed (see Chipuer and Pretty 1999:644) is the model provided by McMillan and Chavis (1986). This model accommodates “community” conceptualized both as a geographical territory (neighbourhood), and as a relational network (work, political, or recreational interests) (Chipuer and Pretty 1999:646). This model, grounded in psychological theories, attributes four dimensions to the sense of community: integration membership, influence, and shared emotional connection.

The **reinforcement of integration and fulfilment of needs** is a sense that values are shared in the group; and the individual needs, physical and psychological, will be met through cooperative behaviour within the community and thereby reinforcing one to behave in a manner acceptable to the community. Such shared values are a strong integrative force as they are able to fit people together so that people meet other’s needs while they meet their own.

The **Membership** is about the sense of belongingness to a larger collective and the identity which comes with that. This involves feelings of fitting within the group, acceptance by the group, and hence a sense of willingness to sacrifice for the group (see also Fisher, Sonn and Bishop 2002; Chipuer and Pretty 1999:646).

The **influence** is a reciprocal feeling that each matter to the group and the group matter to each. It reflects the perceived influence that a person has over the decisions and actions of

the community, and conversely the amount of influence that the community has over the individual actions. It allows for an optimal balance between individual rationality and community rationality; through the requirement of conformity at the group level and consensual validation at the individual level.

The **shared emotional connection** is derived from shared history, culture, significant events and experiences.

Empirical studies have found that sense of community is largely shaped by community focused cognitions and neighbouring behaviour. Community focussed cognition include factors such as length of residency, attachment to place, confidence in community and satisfaction with the community (Perkins and Long 2002:292). Neighbouring behaviour include, familiarity with the neighbours (Glynn 1981); informal social relations and interactions among neighbours (Buckner 1988), use of local facilities (Riger, LeBailly and Gordon 1981); involvement in local associational activities and face-to-face interactions (McMillan and Chavis 1986; Bachrach and Zautra 1985; Florin and Wandersman 1984; Chavis and Wandersman 1990).

8.3 MEASURING THE SENSE OF COMMUNITY

Ever since Sarason (1974) conceptualised the sense of community, there has been a number of efforts to empirically measure it. For a review of these efforts see Hill (1996) and Chipuer and Pretty (1999). Doolittle and MacDonald (1978) factor analysed 26 items and identified 6 dimensions: supportive climate, family life cycle, safety, informal interaction, neighbourly interaction, and localism. Glynn (1981) factor analysed 60 items and reported 6 dimensions: objective evaluation of community structure, supportive relationships in the community, similarity and relationship patterns of community residents, individual involvement in the community, quality of community environment, and community security. Riger and Lavrakas (1981) in their factor analysis of 6 items found two dimensions: social bonding and physical rootedness. Davidson and Cotter (1986) after factor analysing 17 items reported a single dimensional scale. Chipuer and Pretty (1999), in their review, conclude, these studies lack theoretical coherence.

McMillan and Chavis (1986) proposed a theoretically grounded empirical measure of sense of community and called it as Sense of Community Index (SCI) (see also Chavis, Hogge, McMillan, *et al* 1986). Since then SCI has been widely used in different settings. Chipuer and Pretty (1999:654) tested SCI for its validity and concluded, it showed adequate construct validity. However, they recommended using SCI as a unidimensional measure.

Responding to the suggestions on SCI (Perkins, Florin, Rich, *et al* 1990; Chavis and Pretty 1999), Chavis, Lee and Acosta (2008) developed a more comprehensive version of the SCI, the SCI-2, with twenty-four items, and found it to be reliable and valid, across different cultures and geographical contexts.

This research adopted SCI-2 for measuring sense of community in participants of deliberative meetings of the Panchayat. As suggested by the developers, in the items, the name of the community was replaced by respective panchayat name. Then the respondents were asked, how well do each of the item reflects/conforms to their relationship with the community, on a scale of 1-4 (not at all=1, somewhat=2, Mostly=3 and completely=4). Table 8.1 lists these items.

The items 10, 13, 14, 20 and 21 were dropped after piloting of the questionnaire, as they were not relevant to the context and the respondents found them to be confusing³⁷. A total of 19 items in the individual data set with a sample size of 373 complete cases was used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. Following this, principal factor extraction was performed with oblique oblmin rotation. This yielded one factor with an Eigenvalue >1. This factor explained 70% of the variance. It was well defined with all the items loading at >0.32, except item 15 which loaded at 0.18. Most of the items were complex with a loading of >0.32 in two factors.

³⁷ Chipuer (1999:645) observes that the way people construct their sense of community is subject to cultural and geographic influences and hence variation in the scale may be necessary to assess different communities

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.86; average Squared Multiple Correlation (SMC) was 0.46 and average communality was 0.52. The first factor was interpreted as sense of community (SENCOM) and was extracted. The items loading into SENCOM_F exhibited internal consistency with a Cronbach's Alpha of 0.86.

8.4 A MODEL TO TEST THE PROPOSITION

In Chapter Three this research proposed that, at the individual participant level, better deliberative participation is associated with better sense of community; and now, states it in the form of following hypotheses to empirically test it:

H1: *At the individual participant level, higher the frequency of participation in the deliberative meetings of the Panchayat (FREPAR), higher is their level of sense of community (SENCOM)*

$$\delta \text{SENCOM} / \delta \text{FREPAR} = \beta_1 > 0$$

H2: *At the individual participant level, higher the quality of deliberation in deliberative the meetings of Panchayat (DELQUA), higher is their level of sense of community (SENCOM)*

$$(\delta \text{SENCOM} / \delta \text{DELQUA} = \beta_2 > 0$$

To test these hypotheses the research used the following econometric model.

SENCOM =	$\beta_0 + \beta_1 \text{FREPAR_L} + \beta_2 \text{DELQUA} + \beta_3 \text{ELEMEN} + \beta_4 \text{PRESID} + \beta_5 \text{BUREAU} + \beta_6 \text{INDMEN} + \beta_7 \text{INDAGE_L} + \beta_8 \text{INDEDU} - \beta_9 \text{INDSTC} + \beta_{10} \text{ELECAN} + \beta_{11} \text{ASSPAR_L} + \beta_{12} \text{VILFAM} + \beta_{13} \text{HHOCHI} - \beta_{14} \text{HHOBPL} + \beta_{15} \text{PANDEV} + \beta_{16} \text{PANASS_L} - \beta_{17} \text{PANSTC} - \beta_{18} \text{PANBPL} - \beta_{19} \text{CASNUM} + \varepsilon$
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As discussed in Section 8.2 sense of community is shaped by variables which influence community cognition and neighbouring behaviour. Hill (1996) in her review of empirical studies on sense of community reports a range of variables such as age, gender, income, education, race, children in home and length of residency to be associated with sense of community. She also reports "for each of these variables, however, there is at least one

study in which the relationship did not hold true”, (see also SCP 2004) and attributes these variations to the differing context of the study. Based on these and the discussion in Sections 8.2, 2.4 and 1.2.5, three vectors of explanatory variables, at the level of the individual, the household of the individual and the Panchayat were used. Data for variables at the level of Panchayat were obtained from Panchayat data set. Chapter Five provides the measurement and descriptive statistics of these variables.

INDAGE_L was the natural log of the age in years of the individual. It served as a proxy for the length of residence in the village. The older individuals can be expected to have higher levels of sense of community due to higher community focused cognition (Hill 1996).

INDEDU was the education level of the individual. Education improves opportunities for neighbouring behaviour. Hence individuals with higher levels of education were expected to have higher levels of sense of community.

INDSTC was the dummy to indicate whether the individual belonged to Scheduled Caste or Scheduled Tribe. As disadvantaged and marginalized social groups they were expected to show lower levels of sense of community.

ELECAN was the number of times the individual had canvassed in elections in last three years, and **ASSPAR_L** was the natural log of the number of associational meetings attended by the individual last year. As both can improve the neighbouring behaviour, they were expected to be associated with higher levels of sense of community.

VILFAM was the sense of familiarity with the villages in the jurisdiction of that Panchayat, and their inhabitants. As familiarity suggests higher neighbouring behaviour, it was expected to have a positive association with the sense of community (see Glynn 1981).

HHOCHI was the number of children below six years of age in the household. Individuals from household with higher number of children were expected to have higher sense of community (see Hill 1996)

HHOBPL was the dummy to indicate whether individual belonged to below poverty line (BPL) household. Because of the possible reduced opportunities for neighbouring behaviour, individuals from such families were expected to have a lower sense of community.

PANDEV was a factor score of the number of public service organizations and economic activities in the Panchayat.

PANASS_L was the natural log of the number of associations per 1000 people in the Panchayat. As higher number of associations can increase the opportunities for social interactions, individuals from such Panchayats were expected to have higher levels of sense of community

PANSTC was the proportion of Panchayat population belonging to Scheduled Caste and Scheduled Tribe; **PANBPL** was the proportion of Panchayat household categorized as below poverty line, and **CASNUM** was the number of different social groups in Panchayat. For reasons discussed earlier, all of three were expected to be associated with lower levels of sense of community.

8.5 THE RESULTS

The sense of community, the dependent variable, was regressed on, the frequency of participation and the quality of deliberation the hypothesised independent variables; and vectors of variables at the individual, household and panchayat levels, the other independent variables. The analysis was performed in Stata v.13 using complete observations in the individual data set ($n=373$). Table 8.2 displays the regression results along with the correlational statistics and the goodness-of-fit measures.

In the model³⁸, R , the coefficient of multiple correlations was significantly different from zero with the goodness of fit measures, $F(19, 353) = 15.43$; $p < 0.001$, and R^2 of 0.45. The

³⁸ In regression results; BUREAU, HHOBPL, PANSTC and PANBPL were sensitive to outliers in residuals; BUREAU and PANASS_L were sensitive to high leverage scores; BUREAU, PANSTC and CASNUM were sensitive to multivariate outliers; HHOCHI and PANSTC were sensitive to adjusting standard error to clustering effect at the district level.

adjusted R^2 of 0.42 indicates that model explains two-fifths of the variation in sense of community (SENCOM).

The frequency of participation ($\beta=0.28$, $p<0.001$) and the quality of deliberation ($\beta=0.32$, $p<0.001$) showed significant positive association with sense of community. These results failed to reject the hypotheses H1 and H2.

Compared to the citizen participant (the reference category), the elected member and the President and the bureaucrat did not show significantly different levels of sense of community.

Among the individual level variables, age, education, belongingness to disadvantaged social groups and familiarity with the villages and its inhabitants did not show any significant association with the sense of community. As expected, Individuals who had canvassed more in elections ($\beta=0.21$, $p<0.01$) and who had participated more in associational meetings ($\beta=0.10$, $p<0.05$) showed higher levels of sense of community.

Among the household level variables, contrary to expectation, individuals from households with a higher number of children, or from poorer economic status did not show significantly different levels of sense of community.

Among the Panchayat level variables, as expected, individuals from Panchayats with higher number of association per 1,000 population ($\beta=0.10$, $p<0.05$) did show significantly higher levels of sense of community. The individuals from Panchayats with a higher proportion of Scheduled Caste and Scheduled Tribes and from Panchayat with a higher number of social groups though showed a negative association with the sense of community, it was not significant.

8.6 THE DISCUSSION

This chapter using individual level data empirically tested the hypotheses that: higher frequency of participation in deliberative meetings of the Panchayat, and higher quality of

deliberation in these meetings are associated with higher level of sense of community, at the individual participant level.

The results show that the individuals who attended a higher number of deliberative meetings of the Panchayat were significantly associated with a higher sense of community, and that, higher quality of deliberation in these meetings were also significantly associated with higher level of sense of community among participants. These results are broadly in agreement with, the findings reported in the literature, and validate the theoretical principles discussed in Chapter Three.

The result that, participation and sense of community are positively associated, is in line with the similar findings reported by empirical studies such as by Bachrach and Zautra (1985); Joranko (1998); Schweitzer (1996); Brodsky (1996); Perkins, Brown and Taylor (1996); and Wandersman and Giamartino (1980). More specifically, association of deliberative form of participation with sense of community supports the argument of McMillan and Chavis (1986) that face to face interaction is an important determinant of sense of community (see also Bouas and Komorita 1996; Sally 1995; Bornstein 1992). Significant association of both the frequency of participation and the quality of deliberation shows that sense of community is associated with both the opportunities for interaction, as well as the quality of interaction.

Kinney (2012:169) citing a number of empirical studies showed that deliberation improves the sense of community in participants by promoting interdependence, bonding, social ties, coherent collective interests and by reinforcing membership. He concludes these attributes enhances community's capacity to act collectively. Chavis and Wandersman (1990) found, sense of community catalyses community development spirit through a sense of collective empowerment. Buckner (1988) showed sense of community effectively reflects the level of social cohesion in the community and can improve convergence on social issues in interactions. Norton and Haan (2013) argued such convergence provides predictability to interactions in social situations (see also Section 3.2.1); thereby both

incentivises collective action and improves capacity for collective action (see also Woolcock 2011).

The empirical findings discussed above suggest deliberation is positively associated with some of the constituent dimensions of sense of community. This finds coherence with the principles of participatory and deliberative democracy theories, discussed in Chapter Three. Rest of this section discusses how this coherence, helps to interpret the association and how it can possibly alleviate collective action problems.

Pateman (1970:43) while theorising participatory democracy, argued, participation “has an integrative effect and that it aids acceptance of collective decisions”. In support of this, she cited Cole (pp.39) to argue that participatory community is well integrated because of the “social spirit” it inculcates among participants. Then she cited Mill (pp.33) that through participation individual “becomes consciously a member of the greater community” and whenever he has something to do for the public he feels “not only the common weal is his weal, but that it partly depends on his exertions”. Finally, she cited Rousseau (pp.24-34), who argued that participation develops responsible social and political action from the individuals, as they realise that individual action needs to take into account matters wider than one’s own private interests if one is to gain cooperation from others. This, Rousseau argues, promotes self-control as in obedience to the law one prescribes to oneself, increases the feeling of belongingness to the community and also the feeling that public and private interests are linked.

Gutmann and Thompson (1996:52-93) while theorizing what constitutes deliberation explains, in collective action situations scarcity of resources, limited generosity, incompatible values and incomplete understanding quite commonly lead to a lack of convergence of preferences among participants. Under such heterogeneous circumstances, authors argue, binding nature of the deliberative decisions/outcomes incentivises participants to actively seek convergence by showing reciprocal behaviour. To achieve the necessary co-operation and coordination, they offer solution and justification

which are mutually accessible and persuasive to all and exhibit civic integrity and civic management in their behaviour (ibid; see Section 3.1.1).

Sethi (2008) citing several empirical works argued this pro-social behaviour by promoting similarity of motives, coordinating expectations, and improving predictability in transactions transforms opportunists into reciprocals, as they realise to co-operate is rational in their own interests. This incentivises them to align their individual rationality with the community rationality required to achieve and sustain collective action.

Similarly, Putnam *et al* (1993:87-89) persuasively argue that active participation in public affairs produces a civic community characterised by social solidarity, trust and tolerance; and in such civic community, individuals are public spirited and civic institutions are responsive and effective (see also Calhoun (1992) in Section 3.2.2). They attribute this to diffuse reciprocity which they describe as balancing altruism in the short-run with self-interest in the long run. Alinsky (1971, cited in Bandura 1997:500-01) showed the solidarity of a common purpose can help motivate individuals with heterogeneous self-interests to participate in collective action.

The above discussion suggests, observance of deliberative norms, provides the kind of solidary and purposive incentives, which Marwell and Oliver (1993:187-88) argued serves as the selective incentives, suggested by Olson (1965), necessary to overcome collective action problems. In other words, these incentives determine the way the community values and rewards the participants/contributors and reproves/penalises the free riders; which according to Bandura (1997:489) is critical to the success of collective action (see also Hirschman 1970 in Section 2.4.3).

Finkel, Muller and Opp (1989) demonstrated, acting in concert with enough others could achieve a level of collective action, which can successfully overcome free-rider dilemma. Individuals also might be motivated to participate by purposive incentives a set of self-evaluative sanctions rooted in personal standards on principles like ethics, fairness, justice, recognition and respect; lest they face self-devaluative costs (Maxwell and Oliver 1993:187, Bandura 1997:489). Goldstone (1994, cited in Bandura 1997:489) showed the

ingrained norm of contributing one's fair share to the collective outcome creates social pressure to participate.

These solidary and purposive incentives, as against the material incentives, allow individuals to internalise the positive externality arising out of their participation in collective political action. Such individuals are united by a strong sense of interdependence, camaraderie, common understanding of each other's needs, mutual assistance and common agreement about values guiding their action, which make them tie their well-being and sense of identity closely with the community (Bandura 1997:489, Kiser and Ostrom 1983:202-04).

In summary, this chapter empirically showed a higher frequency of participation in deliberative meetings of the Panchayat and better quality of deliberation in these meetings can be associated with higher levels of sense of community. Possibly explanation is, observance of deliberative norms, especially reciprocity, can improve adaptability in behaviour, predictability in interactions and assortativity in motives. This can promote cooperative goals and coordinated strategies to find mutuality in needs through a willingness to understand each other's concerns and values. Such a strategy makes individuals realise it is rational to co-operate in their own interest and thereby align their rationality with the community rationality for the sustenance of collective action. Also, constituent dimensions of sense of community, be it integration or membership or shared values/concerns, possibly provide the necessary solidary and purposive incentives to the participants, to resist free riding by internalising the externality effect of their participation and to actively seek convergence in the midst of heterogeneity in arriving at the common preference.

Table 8.1: The list of Items Used to Measure the Sense of Community

	Items	Mean	SD	Factor loading
Reinforcement of integration and fulfillment of needs				
1	You get your important needs met because you are a part of this Panchayat community	2.76	0.80	0.55
2	Members of this Panchayat community and you value the same things	2.46	0.84	0.63
3	This Panchayat community has been successful in getting the needs of its members met	2.94	0.80	0.66
4	Being a member of this Panchayat community makes you feel good	3.59	0.64	0.61
5	When you have a problem, you can talk about it with members of this Panchayat community.	3.13	0.79	0.32
6	People in this Panchayat community have similar needs, priorities, and goals	2.18	0.83	0.58
Membership				
7	You can trust people in this Panchayat community	3.11	0.67	0.53
8	You can recognize most of the members of this Panchayat community	3.38	0.71	0.63
9	Most of the Panchayat community members know you	3.45	0.69	0.64
10	This community has symbols and expressions of membership such as clothes, signs etc	Dropped		
11	You put a lot of time and effort into being part of this Panchayat community	2.80	0.85	0.66
12	Being a member of this Panchayat community is a part of your identity.	3.33	0.76	0.67
Influence				
13	Fitting into this Panchayat community is important to you.	dropped		
14	This Panchayat community can influence other communities.	dropped		
15	You care about what other members of this Panchayat community think about you	2.21	1.01	0.18

	Items	Mean	SD	Factor loading
16	You have influence over what this Panchayat community is like	2.71	0.72	0.63
17	If there is a problem in this Panchayat community, members can get it solved	2.85	0.64	0.54
18	This Panchayat community has good leaders	2.89	0.75	0.36
Shared emotional connections				
19	It is very important to you to be a part of this Panchayat community	2.83	0.70	0.48
20	You spend time with other community members a lot and enjoy being with them.	dropped		
21	You expect to be a part of this Panchayat community for a long time.	dropped		
22	Members of this Panchayat community have shared important events together, such as fairs, festivals and problems	3.11	0.78	0.53
23	You feel hopeful about the future of this Panchayat community	2.98	0.73	0.63
24	Members of this Panchayat community care about each other.	3.15	0.72	0.62

Table 8.2: The Results of Regression Analysis

Variable name	SENCOM			
	<i>r</i>	<i>pr</i>	β	<i>t</i>
FREPAR_L	0.48	0.20	0.28***	3.90
DELQUA	0.49	0.35	0.32***	7.11
ELEMEM (Dummy)	0.02	-0.03	-0.03	-0.44
PRESID (Dummy)	0.01	-0.03	-0.04	-0.58
BUREAU (Dummy)	0.18	0.09	0.14*	1.64
INDMEN (Dummy)	0.09	0.02	0.02	0.39
INDAGE_L	0.07	0.06	0.05	1.19
INDEDU	0.25	0.06	0.06	1.11
INDSTC (Dummy)	-0.11	0.03	0.02	0.56
ELECAN	0.20	0.21	0.21***	3.99
ASSPAR_L	0.24	0.12	0.10**	2.16
VILFAM	0.22	0.10	0.08*	1.95
HHOCHI	0.04	0.07	0.05	1.29
HHOBPL (Dummy)	-0.15	0.05	0.04	0.90
PANDEV	0.03	0.01	0.01	0.32
PANASS_L	0.15	0.12	0.10**	2.22
PANSTC	-0.26	-0.10	-0.09*	-1.89
PANBPL	0.05	0.06	0.05	1.15
CASNUM	-0.09	-0.09	-0.08*	-1.83
Constant ¹	-	-	0.72	1.22
Adjusted R ²	0.42			
F-statistic	F(19, 353) = 15.43; p<0.001			
n	373			
<i>r</i> :Pearson’s coefficient of linear correlation; <i>pr</i> : partial correlation coefficient; β :standardised regression coefficient; R ² : coefficient of determination; <i>t</i> : t-statistic; *** significant at ≤ 1 percent; ** significant at ≤ 5 percent; * significant at ≤ 10 percent; ¹ not standardised β				
Descriptive statistics of: SENCOM: Minimum value 3.00; Maximum value 6.10; Mean 4.66; Standard Deviation 0.67				

CHAPTER 9: DELIBERATIVE PARTICIPATION AND RULE OF LAW

This research modelled Panchayat as an organisation with an objective to provide local public goods; in engagement with the local citizens to ensure correspondence with the local needs. The collective choice institutions and the operational level institutional of the Panchayat, govern individual behaviour, in collective action for achieving this objective, through a set of formal legislated rules and informal norms (see Sections 2.3.1 and 6.1).

The role of the collective choice institutions, as political institutions, is to identify in a responsive manner, the common public good needs of the community through facilitating articulation (Chapter Six), communication (Chapter Seven) and collectivisation (Chapter Eight) of individual level preferences and frame it as a collective demand through policy objectives. The role of the operational level institutions, as bureaucratic institutions, is to convert the policy objectives into supply of local public health good outputs in a rule-bound accountable manner.

In the conversion of the policy objectives into actual public good outputs; the collective choice actors (the elected representatives) have the responsibility to legislate policies which incorporate these objectives, and the operational level actors (the bureaucrats) have the responsibility to faithfully administer the legislated policies under the oversight of collective choice institution.

The purpose of oversight is to achieve administrative commitment to the legislative goals (McCubbins and Schwartz 1984) through rulemaking, rule application and rule adjudication (see Section 2.5). The premise is, if the rules are made through backward induction from desired outputs, then ensuring commitment to these rules in their application and adjudication should necessarily lead to those outputs (Miller 2005:215; Ostrom 2005:186).

In such rule-based governance; rule of law³⁹ as a measure of commitment to rules is said to exist when there is no gap between *de jure* (rules in form) and *de facto* (rules in use) rules

³⁹ Usage of the concept of rule of law in the literature can also be found in the context of, democratic theories (Maravall and Przeworski 2003), overall levels of governance (United Nations 2007); and in legalistic disciplines (Bingham 2011).

(see Ostrom 2005:186). The extent to which the rule of law exists is a function of; *ceteris paribus*, how well the actors are informed about the rules (see Chapter Six); their capability to credibly commit to the rules while administering the policies and manage dilemmas, in discretionary action and in accountability, which may arise while doing so (see Section 2.5).

This chapter examines how these dilemmas influence the credibility of commitment to the rule of law; and empirically tests the proposition that, at the Panchayat level, better deliberative participation is associated with better rule of law in its operations. The chapter is structured as follows:

The first section explains why the credibility of commitment is inherent to the rule of law. The second section examines certain dilemmas which can arise while committing to the rules. The third section describes the strategy to measure the rule of law. The fourth section specifies the model to empirically test the proposed association. The fifth section describes the results of testing. The sixth section discusses the results and then concludes.

9.1 CREDIBLE COMMITMENT AND RULE OF LAW

In Local Governments, while the elected representatives have the authority over the bureaucrats; the latter have better information about rules and the competence to, administer formers' legislated policies (see Moe 2013:1159-68; see Section 6.5). Hence, to achieve their legislative goals, the elected representatives delegate their authority along with discretion in decision making to the bureaucrats; and hold them accountable for the faithful administration of their policies (*ibid*; Behn 2001:1-21).

This association approximates to that of 'principal-agent' relationship with the elected representatives as the principals and the bureaucrats as their agents (see Moe 1984; Miller 2005; Mitnick 1984). The principal-agent is used here as an analytic expression, in which the principal, enters *ex-ante* into a contractual agreement with the agent, in expectation that the agent will, *ex-post* to the agreement, choose actions that produce the outcomes desired by the principal (Moe 1984:756). The assumption is, the incentives of the agent,

ex-ante and ex-post to the contractual agreement remain the same, and hence will credibly commit to the rules of the contract, ex-post to the agreement.

The commitment can gain credibility in two ways: motivational and imperative. The commitment is motivationally credible when there is no divergence between ex-ante and ex-post incentives of the agent even in the presence of an opportunity to renege on their commitment by transgressing the rules of the contract. The motivational credibility is endogenous, discretion-enabled, incentive compatible and hence self-enforcing (Shepsle 1991). However, the preferences of the agent may differ from that of principal and the ability to commit is an aspect of the practice of self-management or egonomics (Schelling 1984). Hence when faced with an opportunity, the agents may renege on their commitment and transgress the rules to further their own preferences (Miller 2005:205); which could be better income, social status and career concerns as suggested by Niskanen or different ideological outlook (see Rockman 2011; Section 2.6)⁴⁰.

As a result, to improve commitment, the principals have shifted towards imperative credibility mechanisms, wherein, even if the agent desires to renege it is not possible as commitment is secured ex-ante and enforced ex-post (Shepsle 1991) through a contract. The imperative credibility is exogenous, discretion-disabled, less incentive compatible and hence needs oversight (ibid).

So, principals using their authority offer agents a “take it or leave it” contract; wherein ex-ante, agents have to commit to the legislated rules while administering the policies and ex-post, their commitment is legally enforced (for more details see Weingast and Moran 1983; Balla 1998; McCubbins and Schwartz 1984; Moe 2013: 1153-61, 1984; Miller 2005; Bolton and Dewatripont 2005; Martimort 2008). The rules are expected to provide clarity to agents on what actions are expected, allowed and prohibited (see Ostrom 2005: 186-214). By this, rules facilitate principals to identify points of transgression by the agents (Weingast 1997, 2003). To internalise the informational advantage of the agents about the

⁴⁰ For a critique of these models for their inherent fallacies in assumptions see Dunleavy (1991:162-174)

rules and to reduce the transactional costs of oversight, principals create a hierarchy among the agents (Moe 1984).

In the context of the Panchayats, rulemaking happens at the constitutional level institutions and is commonly applicable to all the Panchayats (see Section 2.3). Hence achieving administrative commitment to legislative goals is a function of commitment to rule application and rule adjudication at the operational level (see Section 2.3.6).

The hierarchically structured bureaucratic team is headed by Panchayat Development Officer (PDO) as the chief administrative officer followed by the secretary; with accountant, bill collector and supporting staff as other members. The bureaucrats are legally bound by; ex-ante contractual agreement with the Panchayat, wherein, rules stated in 1993 Act prescribes their actions, ex-post.

9.2 DILEMMAS IN RULE OF LAW

In democratic settings with multiple collective choice levels and operational levels, the principal-agent relationship can be complex. For instance, depending on the level, citizens can be principals, politicians as their agents; politicians can be principals, bureaucrats as their agents; and senior bureaucrats can be principals, junior bureaucrats as their agents (Moe 1984:765-66). This context of multiple principals and multiple agents creates certain inherent dilemmas in the delegation of discretion in decision-making and expectation of accountability for the exercise of it.

9.2.1 Dilemmas of discretion

The rules of the institutions of the Local Governments and the property rights of the public goods that they provide can be complex (see Section 6.1). Hence the contracts that the principals enter into with the agents are essentially incomplete in terms of inability to foresee all future contingencies, difficulty in applying rules to those which can be seen and difficulty in objectively adjudicating contingencies so that appropriate rules can be applied (Dixit 1996:20; see also Hart 2008 and North 1990:52-53). This incompleteness necessitates discretion in the adjudication of the rules to promote responsiveness in their

application. Limiting discretion can impede judgement and responsiveness (see Lipsky 2010), and promote a culture of suspicion and fear, leading to rigidity in rule application (Behn 2001:81-102).

However, in the context of multiple principals and multiple agents (Moe 2013) with each agent performing multiple tasks or multi-dimensional tasks (Holmstrom and Milgroom 1991); which are of differing priorities to different principals (ibid); linking individual efforts to the observance of rules becomes difficult. This non-observability and hence non-verifiability can:

1. Promote moral hazard behaviour by the agents, such as 'shirking' from commitments, with a negative externality (Alchian and Demetz 1972); and
2. Aggravate adverse selection problems, as agents have an inherent informational advantage, as private information, about the rules as compared to their principals.

The scope for differential interpretation of the rules due to incomplete contracts in the context of adverse selection and moral hazard can incentivise opportunistic behaviour⁴¹ among agents by reneging on their commitments. Motivated by the material incentives the agents enter into collusive behaviour with actors having 'special interests' leading to various forms of corruption, defined as 'using public value for private gain' (Svensson 2005), or more generally as 'breaking the rule' (Banerjee 2013).

This Situation acquires further complexity in the contexts of: public good provision, multiple agents assigned to single task (Martimort 2008), lower level agents (Rockman 2011), roles and responsibilities of the agents not clearly specified (see Section 2.1) and collective action problems among 'warring principals' (Moe 1984).

Some of the factors which can constrain such collusive behaviour could be: educated and politically aware citizenry, absence of high social or economic inequality which can inhibit those in lower rungs from effectively engaging in local governance, fair political

⁴¹ Opportunism is a tendency to take advantage in any circumstances of all available means to further one's own preferences (Williamson 1996:225),

competition, political non-dominance and availability of reliable sources of information (Bardhan and Mookherjee 2006:9, 2004; see Besley *et al* 2005).

9.2.2 Dilemmas of accountability

The requirement of accountability of the agents (as holdees) to the principals (as holders) in their commitment to the rules of the contract creates inherent dilemmas in bureaucratic action requiring a trade-off between procedural correctness and performance effectiveness (see Moe 2013).

The rule of law, is perceived as a fair form of governance, as

1. Rules are impersonal, clear, consistent and universally applicable to its constituents (Peters 2001:39-43).
2. The rules have the power to correct and prevent failing of bureaucratic action.
3. Application of general rule to specific cases makes bureaucratic actions predictable (Wilson 1989:334-36).

Hence if bureaucrats commit to the rules, it can be seen to promote fairness, equality, continuity, reliability, and predictability of their actions.

However, such commitment can also portray their action as impersonal, non-responsive, risk averse, restricted by narrow departmental concerns and rigid with excessive reliance on precedence (Rockman 2011:166-172); popularly summarized under the rubric of red-tape. This situation further confounds the dilemmas of discretion described in the previous section.

Situation gains further traction as in being accountable, should one be accountable for one's own action or for the action of the collective; should one act as a trustee to one's consciousness or as a delegate of one's constituency; should the constituency be citizens, elected members or the superiors; and being held accountable should be considered as a benefit or burden of public service (Behn 2001:1-21; see March and Olsen 1995:142-167 for similar concerns).

9.3 MEASURING THE RULE OF LAW

The large majority of the existing measures of rule of law are aimed at assessing broader governance concerns at the level of the nation-state (see United Nations 2007 for a review) or at the level of individual systems, such as health systems (see Siddiqui 2009 for a review). In the context of this research, though studies such as by Vijayalakshmi (2008), Bardhan *et al* (2004, 2010) and Besley *et al* (2005) have examined issues related to the rule of law in Panchayats, there has been a very little attempt to systematically measure it.

Hence this research using the conceptualisation of rule of law as the basis; empirically measured it as the gap between rules in form (*de jure*) and rules in use (*de facto*). To arrive at the rules in form, this research identified a set of items in the 1993 Act, which specified the bureaucratic operations related to planning, administration, allocation, reviewing and redressing grievances, in relation to the provision of local public health goods (see Section 1.2.1). Then to arrive at the rules in use, it extracted data from Panchayat records using Panchayat questionnaire, on the execution of these operations.

Based on the above strategy, the following operations were identified to measure the rule of law (please see Table 9.1 for measurement; see also Sections 1.2 and 6.3 for descriptive details):

1. Program planning functions:

- a. The formation of the standing committees (Section 61 of the 1993 Act): As soon as a new batch of elected members takes office, the Panchayat is required to form three committees: the civic amenities committees, the production committee, and the social justice committee to assist program planning in these three key areas.
- b. Convening standing committee meetings in the year 2012-13⁴².
- c. Preparation of annual budget and the annual work plan (Sections 58 and 241 of the 1993 Act) for the year 2012-13: at the beginning of every financial year an annual budget for all the activities of the Panchayat estimating both the

⁴² The 1993 Act does not specify the frequency with which these meeting are to be held.

revenue and the expenditure, along with detailed plan of work for these activities, has to be prepared. Then the budget along with the work plan has to be presented to Grama Sabha for its consideration and recommendations and then to Samanya Sabha for its approval.

2. Program administration and revenue raising functions:

- a. Maintenance of minutes of the Grama Sabha and the Samanya Sabha meetings (Sections 55 and 111 of the 1993 Act) in the year 2012-13: Detailed minutes of these meetings with name and signatures of the attendees have to be maintained in an officially certified register with pre-numbered pages. These minutes have legal binding. The minutes of the first Grama Sabha and first Samanya Sabha meetings held in 2012-13 were assessed along five criteria using binary measurement and then the scores were aggregated: mention of date and time, completeness, signed by all present, presence of empty pages/spaces before or after the written minutes, and presence of all the certified pages.
- b. Maintenance of cash register (Section 243 of the 1993 Act): All the cash and bank transaction of the Panchayat should be recorded in a register on a daily basis.
- c. Maintenance of material stock register (Section 243 of 1993 Act): Purchase and issue of all the materials should be recorded in a register as and when they occur. A material purchase bill in the month previous to the date of the visit of the research team was randomly selected and then checked whether it was recorded in the stock register.
- d. The proportion of trading shops having a license (Section 199 of the 1993 Act): Panchayats are expected to issue licenses to all the trading establishments/concerns, which permit them to carry out commercial activities for a fee. Panchayats are authorised to use this revenue for providing public services.
- e. The revenue collected as a proportion of demand in the year 2012-13 (Section 200 of the 1993 Act): The Panchayats are expected to maintain a 'demand and

collection register' listing all the users of its various public services, and the tax expected (demand) and collected from them.

3. Program review, transparency and grievance redress functions

- a. The preparation of annual income and expense report (Section 241 of the 1993 Act): At the end of every financial year Panchayat is expected to prepare a report on the total expenses incurred and total revenue raised for the year ended, and present it to Grama Sabha for its consideration and then to Samanya Sabha for approval.
- b. The social audit report: Jama Bandhi, the social audit, is to be held annually every year in the period from September 15th to August 15th by a team appointed by the executive officer of the block Panchayat. It involves public inspection of, Panchayat records and the services provided by it in the previous financial year. This audit happens in a public place in the presence of local citizens, with a purpose to promote transparency and efficiency in Panchayat's operations. The social audit report should be submitted to Grama Sabha for its consideration and recommendation and then to Samanya Sabha for necessary action. A similar social audit should be held for activities performed under the MGNREGA programme.
- c. The Panchayat is expected to give information to its citizens about its programmes and operations by displaying key information on these in public spaces.

A total of 14 items in the panchayat data set with a sample size of 73 complete cases was used for factor analysis. Initially, principal component extraction was performed to estimate the number of factors, the absence of multicollinearity and factorability of the correlation matrices. Following this, principal factor extraction was performed with oblique oblimin rotation. This yielded one factor with an Eigenvalue >1. This first factor explained 60% of the variance. It was well defined with all the items loading at >0.32, except item numbers 1, 8 and 9 which loaded at 0.26, 0.28 and 0.29 respectively. Most of the items were complex with a loading of >0.32 in two or more factors.

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.67, average Squared Multiple Correlation (SMC) was 0.51 and average communality was 0.57. The first factor was interpreted as the rule of law (RULLAW) and it was extracted. The items loading into the RULLAW exhibited internal consistency with a Cronbach's Alpha of 0.79.

9.4 A MODEL TO TEST THE PROPOSITION

In Chapter Three this research proposed that, at the Panchayat level, better deliberative participations is associated with better rule of law in Panchayat's operations; and now, states it in the form of following hypotheses to empirically test it:

H1: *At the Panchayat level, better deliberative participation in the Grama Sabha meetings (GRAPAR) is associated with better rule of law (RULLAW) in operations of the Panchayat*

$$\delta RULLAW / \delta GRAPAR = \beta_1 > 0$$

H2: *At the Panchayat level, better deliberative participation in the Samanya Sabha meetings (SAMPAR) is associated with better rule of law (RULLAW) in operations of the Panchayat*

$$\delta RULLAW / \delta SAMPAR = \beta_2 > 0$$

To test these hypotheses the research used the following econometric model.

RULLAW =	$\beta_0 + \beta_1 GRAPAR + \beta_2 SAMPAR + \beta_3 PPRMEN + \beta_4 PPREDU + \beta_5 PPRNTE -$ $\beta_6 PEMTOT + \beta_7 PSTTOT + \beta_8 PSTYOS - \beta_9 PSTNPR - \beta_{10} PANSTC - \beta_{11} PANBPL +$ $\beta_{12} PANDEV_L + \beta_{13} PANBLT + \beta_{14} PANASS_L + \beta_{15} PANASP + \varepsilon$
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Informed by the discussion in Sections 1.2, 1.3, 2.2, 2.5, 2.6, 9.1 and 9.2 four vectors of explanatory variables were identified. These measured the characteristics of the President of Panchayat, its elected members, its staff and its socio-political-economic context. Chapter Five provides the measurement and the descriptive statistics of these variables.

PPRMEN indicates the gender of the Panchayat President; coded as '1' if male and as '0' if female. A study by Vijayalakshmi (2008) found the gender of the President did not significantly influence the levels of rule of law in Panchayats of Karnataka state.

PPREDU was the dummy for education level of the Panchayat President, coded as '1' if educated at least up to college level (minimum 10 years of formal education) and as '0' if not; and **PPRNTE** was the number of terms Panchayat President has served as the President, coded as '1' if > one term and as '0' if just one term. Both of these could be associated with better knowledge of rules, and serving for more than one term may also indicate better performance. Due to these reasons both were expected to have a positive association with rule of law.

PEMTOT was the total number of elected members in the Panchayat. It was expected to have a negative association with rule of law because of possible difficulty of collective action among multiple 'warring principals' (Moe 1984) and for other reasons discussed in Section 9.2.1.

PSTTOT was the total number of Panchayat staff, coded as '1' if >1 and as '0' if equal to 1. A Higher number of staff can facilitate better compliance to operative procedures and hence a positive association with rule of law. However, the higher number could also lead to non-observability of their tasks especially in the context of local public health goods (Section 9.2.1).

PSTYOS was the average experience in years of the Panchayat staff, coded as '1' if > 2 years and as '0' if ≤ 2 years (median=2 years). For reasons explained under PPRNTE, it was expected to have a positive association with rule of law. However, studies such as by Blair (2000), Ackerman (2004), and Goetz (2001); suggest senior public servants may be less incentivised to perform, due to their entrenched positions.

PSTNPR was the number of Panchayats, the staff was responsible for, coded as '1' if > one Panchayat and as '0' if just one Panchayat. For reasons discussed under PSTTOT, it was expected to have a negative association with rule of law.

PANSTC was the proportion of Panchayat population belonging to Scheduled Caste and Scheduled Tribe, and **PANBPL** was the proportion of households categorized as below poverty line. Both were expected to have a negative association with rule of law (see Sections 7.4 and 9.2.1).

PANDEV_L is the natural log of factor score of a number of public service organizations and economic activities in the Panchayat (see Section 6.4).

PANBLT is the average literacy rate at the block level. It was expected to have a positive association with rule of law (Section 9.2.1).

PANASS_L is the natural log of a number of associations per 1000 people in the Panchayat. It was expected to have a positive association with rule of law (Sections 6.4 and 8.6).

PANASP is the dummy for Panchayats which have received special development grants in the period 2010-2013 as they were located in backward regions as identified by Nanjundappa report (2002), and code as '1' if they have received and as '0' if they have not.

9.5 THE RESULTS

Rule of law, the dependent variable, was regressed on, participation in Grama Sabha and participation in Samanya Sabha the hypothesised independent variables; and vectors of variables which measured the characteristics of the President of Panchayat, its elected members, its staff and its socio-political-economic context as other independent variables. The analysis was performed in Stata v.13 using complete observations in the Panchayat dataset ($n=73$). Table 9.2 displays the regression results along with the correlational statistics and the goodness-of-fit measures.

In the model⁴³, R , the coefficient of multiple correlations was significantly different from zero with the goodness of fit measures, $F(15, 57) = 14.08$; $p < 0.001$, and R^2 of 0.79. The

⁴³ In regression results; PPREDU was sensitive to outliers in residuals, PSTTOT is sensitive to multivariate outliers; and SAMPAR, PSTTOT and PANASS_L were sensitive to adjusting the standard error to clustering effect at the district level.

adjusted R^2 of 0.73 indicates that model explains close to three-fourths of the variation in rule of law.

The deliberative participations, in Grama Sabha meetings ($\beta = 0.30$, $p < 0.001$) and in Samanya Sabha meetings ($\beta = 0.25$, $p < 0.01$) showed significant positive association with the rule of law. These results failed to reject the hypotheses H1 and H2. However, association with Samanya Sabha was sensitive to the clustering effect at the district level.

Among the characteristics of the Panchayat President, Panchayats, with women as Presidents ($\beta = -0.20$, $p < 0.01$), with Presidents educated at least up to college level ($\beta = 0.14$, $p \leq 0.05$), and Presidents who had served more than one term ($\beta = 0.39$, $p < 0.001$), all showed significantly higher levels of rule of law.

Among the characteristics of the elected members, Panchayats with a higher number of elected members showed lower levels of rule of law, though not significant.

Among characteristics of the Panchayat staff, Panchayats having higher number of staff ($\beta = 0.20$, $p < 0.01$) showed significantly higher level of rule of law. Panchayats, with staff who have higher average experience, showed lower levels of rule of law, though not significant. Panchayats, whose staff shared additional responsibilities, did not show any significantly different levels of rule of law.

Among characteristics of the Panchayat, Panchayats having higher literacy levels at block levels ($\beta = 0.32$, $p < 0.01$) showed significantly higher levels of rule of law. However, contrary to the expectation, Panchayat having a higher number of associations per 1,000 population ($\beta = -0.19$, $p \leq 0.01$) showed significantly lesser levels of rule of law. The Panchayats, having a higher proportion of member from disadvantaged groups, showed lower levels of rule of law, though not significant. Finally, the Panchayats having a higher number of public organizations and higher economic activities, and those which received special development grants did not show significantly different levels of rule of law.

9.6 THE DISCUSSION

This chapter using Panchayat level data empirically tested the hypothesis that: better deliberative participation in Grama Sabha and Samanya Sabha meetings is associated with better rule of law in operations of the Panchayat. The results substantiate this proposition. However, association with Samanya Sabha meetings was sensitive to the clustering effect at the district level.

These results are broadly in agreement with, the findings reported in the literature. Ghatak *et al* (2002) found, better participation in Grama Sabha enhanced the accountability of, the officials and the elected representatives of the Panchayats in West Bengal. Heller *et al* (2007) found, better participation in Grama Sabha was associated with better implementation of the programmes in Panchayats of Kerala. Widmalm (2005) found, better participation was associated with higher perception in people that officials are accountable, in Panchayats of Madhya Pradesh (see also Goetz and Jenkins 2001). Crooks and Manor (1998) found democratic participation by the citizen in the local public institutions; improves commitment of officials, accountability mechanisms, and responsiveness as in congruence between policy objectives and citizen preference.

The results also validate the theoretical principles discussed in Chapter Three. One possible interpretation of the results is the norms of the deliberative participation can be associated with better commitment to the rule of the law, by reducing the dilemmas, in discretion and in accountability.

The deliberative participation and the dilemmas in discretion

The observance of deliberative norms can promote judiciousness in discretionary action and reduce opportunistic behaviour by reducing the problems related to committing to the rule of law such as adverse selection, moral hazard, and incomplete contract.

In a deliberative setting, the requirement to give reasons linking actions to outcomes and the repetitive nature of the meetings can make talk costly and commitment to it more credible. Also, as part of the collective, informed consent for the common choice increases the motivations to credibly commit to it (Section 3.4)

The deliberative process by making information about the rules available and accessible; converts what is private information into common knowledge (see Section 6.6) and hence can reduce the problems of adverse selection due to information asymmetry. Integrative effect of deliberation on its participants incentivises solidary and purposive motives, which can improve their motivational credibility and alleviate moral hazard behaviour (see Section 8.6). The requirement that deliberation has to happen in public sphere, has a sanctioning effect on the pure material incentive of opportunistic collusive behaviour through disrepute, and promotes altruistic behaviour through recognition (see Mansbridge *et al* 2010; Bohman 1996:140; Gutmann and Thompson 1996:95-128).

North (1990:52-54) observed incomplete contracts are common, and social norms as informal institutions facilitate transactions under such conditions. Gutmann and Thompson (1996) explained, reciprocity in deliberation creates confidence in deliberants to act in a pro-social manner in expectation that others will respond in the same manner (see also Sethi 2008 and Section 3.2.1). Fehr and Gächter (2000) empirically showed, the reciprocal expectation, by improving predictability in interactions can overcome the limitations of incomplete contracts. Ostrom and Walker (2003) in their influential book *Trust and reciprocity* used extensive empirical evidence showed, reciprocal behaviour develops trust. Behn (2001:86) argued trust is the key element in overcoming dilemmas in discretion.

The deliberative participation and the dilemmas in accountability

The deliberative participation can also help to overcome dilemmas of accountability by providing clear answers to the questions such as who is accountable, for whom, for what, how and why. Democratic participatory setting views accountability as an instrument of social control with motivational and cognitive functions (March and Olsen 1995:146). Deliberative setting holds that all the participants are apriori equal and each is accountable to the collective (Gutmann and Thompson 1996:128; Sections 3.3.1 and 3.3.2).

As a holder of accountability one assumes responsibility for one's individual action, and for the action taken on behalf of the collective (March and Olsen 1995:142). The holders of accountability are those who are bound by the decision and those who are affected by the

decisions (Gutmann and Thompson 1996:128). The discourse of account giving by the holder to the holders involves, justifying their action or inaction both in moral as well substantive terms, through reasons which are accessible and acceptable to the holders (ibid:129). The norms of deliberation provide the commonly agreed currency for the discourse and also the criteria to assess the discourse (see Section 3.2.3). While accepting the justification, the holders critically examine the account using the logic of consequences to assess the outcome of the action, and logic appropriateness to assess the means used to achieve the outcomes (March and Olsen 1995: 141-83; see also March and Olsen 2008).

The significant association of characteristics of the President with rule of law supports the observation by Chattopadhyay and Duflo (2004) and Chattopadhyay *et al* (2006) that, the Panchayat can have effective control over their policy decisions and the identity of the policy maker can influence these policies. Higher rule of law in Panchayats with women as Presidents supports that general perception that women in public service are less associated with corruption (see Goetz 2007; Hossain and Musembi 2010). Positive association of overall literacy levels with rule of law further establishes the externality effect of education, reported in earlier chapters and by earlier studies.

In summary, this chapter showed better participation in Grama Sabha meetings can be associated with better rule of law in operations of the Panchayat. A possible explanation is better deliberative participation can be associated with reduced dilemmas in discretionary action due to better information about rules, the better credibility of talk, it being linked to outcomes; sanctioning effect on self-seeking material motives; promotive effect on common good altruistic motives; and predictability in exchanges due to reciprocal behaviour and trust. Observance of deliberative norms can also be associated with reduced dilemmas in accountability as it uses the logic of consequences to assess outcomes of one's action and logic appropriateness to assess the means used to achieve the outcome. In addition, in giving account for one's (in)action it specifies to whom, for what, why and how. These can enhance the accountability and responsiveness in bureaucratic action in achieving administrative commitment to the legislative goals.

Table 9.1: The list of Items Used to Measure the Rule of Law

	Items	Measurement	Mean	Factor loading
1	Formation of standing committees: Production committee Civic amenities committee Social justice committee	For each committee: 0: committee not formed 1: if formed in 2010 0.5: if formed 2011 onwards	2.40	0.26
2	Standing committee meetings held in 2012-13	0: no meeting held 1: meetings held	0.21	0.51
3	Annual budget for 2012-13 prepared and presented in Grama Sabha (GS) and Samanya Sabha (SS)	0: not prepared 0.5: prepared not presented Additional 0.5 point each for presentation in GS and SS	0.62	0.49
4	Annual work plan for 2012-13 prepared and presented in Grama Sabha and Samanya Sabha	0: not prepared 0.5: prepared not presented Additional 0.5 point each for presentation in GS and SS	1.04	0.60
5	Maintenance of minutes of the first Grama Sabha meeting in 2012-13	Five criteria were used to assess. For each criterion: 0: if not fulfilled 1: if fulfilled	4.10	0.57
6	Maintenance of minutes of the first Samanya Sabha meeting in 2012-13	Five criteria were used to assess. For each criterion: 0: if not fulfilled 1: if fulfilled	4.40	0.61
7	Maintenance of the cash register	0: not maintained 0.5: maintained but not updated 1: maintained and updated	0.55	0.61
8	Maintenance of the material stock register	0: not maintained 0.5: maintained but not updated 1: maintained and updated	0.61	0.28

	Items	Measurement	Mean	Factor loading
9	The proportion of trading shops having licence in 2012-13	Number of shops having license /total number of shops	0.53	0.29
10	The revenue collected as a proportion of demand in 2012-13	Total revenue collected/total revenue demand	0.30	0.75
11	Annual income and expense report for 2011-12 prepared and presented in Grama Sabha and Samanya Sabha	0: not prepared 0.5: prepared not presented Additional 0.5 point each for presentation in GS and SS	0.60	0.65
12	Jama Bandhi social audit report for 2011-12 prepared and presented in Grama Sabha and Samanya Sabha	0: not prepared 0.5: prepared not presented Additional 0.5 point each for presentation in GS and SS	0.91	0.72
13	MGNREGA social audit report for 2011-12 prepared and presented in Grama Sabha and Samanya Sabha	0: not prepared 0.5: prepared not presented Additional 0.5 point each for presentation in GS and SS	0.57	0.33
14	Information about Panchayat activities displayed in Public spaces	Factor score of 6 items (see Section 5.4 for measurement)	0.40	0.73

Table 9.2: The Results of Regression Analysis

Variable name	RULLAW			
	<i>r</i>	<i>pr</i>	β	<i>t</i>
GRAPAR	0.64	0.43	0.30***	3.10
SAMPAR	0.33	0.38	0.25***	2.69
PPRMEN (Dummy)	-0.14	-0.35	-0.20***	-2.44
PPREDU (Dummy)	0.21	0.25	0.14**	1.37
PPRNTE (Dummy)	0.30	0.56	0.39***	4.54
PEMTOT	-0.22	-0.21	-0.14	-1.73
PSTTOT (Dummy)	0.23	0.34	0.20***	2.73
PSTYOS (Dummy)	-0.19	-0.21	-0.12*	-1.64
PSTNPR (Dummy)	0.16	0.12	0.06	0.98
PANSTC	-0.41	-0.14	-0.08	-1.23
PANBPL	0.10	-0.02	0.01	-0.03
PANDEV_L	0.13	0.14	0.09	1.19
PANBLT	0.67	0.39	0.32***	2.48
PANASS_L	0.10	-0.33	-0.19***	-2.49
PANASP (Dummy)	-0.21	0.12	.06	0.75
Constant ¹			0.60*	1.92
Adjusted R ²	0.73			
F-statistic	F(15, 57) = 14.08; p<0.001			
n	73			
<i>r</i> :Pearson’s coefficient of linear correlation; <i>pr</i> : partial correlation coefficient; β :standardised regression coefficient; : R ² coefficient of determination; <i>t</i> : t-statistic; *** significant at ≤ 1 percent; ** significant at ≤ 5 percent; * significant at ≤ 10 percent; ¹ not standardised β				
Descriptive statistics of: RULLAW: Minimum value 0.29; Maximum value 2.55; Mean 1.62; Standard Deviation 0.50				

CHAPTER 10: DELIBERATIVE PARTICIPATION AND BASIC WATER AND SANITATION SERVICES

This research aimed to investigate the question, *whether and how better participation in deliberative meetings of the Panchayat is associated with better provision of basic water and sanitation services.*

The Chapters Six to Nine have attempted to provide two explanations as to how better deliberative participation could be associated with better provision of basic water and sanitation service. First, better deliberative participation can be associated with better capability of the participants to collectively engage to articulate, communicate and identify their common service needs and frame it as a collective demand, through policy objective, for provision by the Panchayat. Second, better participation in Grama Sabha meetings can be associated with better rule of law in policy administration; suggesting rule-bound conversion of policy objectives into the supply of local public health goods.

The present chapter empirically tests the proposition, whether better participation in Panchayat meetings, is associated with better provision of basic water and sanitation services (henceforth services) by the Panchayats. The chapter is structured as follows.

The first and the second sections recapitulate and build on the earlier discussions on the present arrangements for the provision of the services and the state of access to these services. The third section describes the strategy to measure the levels of provision of these services. The fourth section specifies the model to empirically test the proposed association. The fifth section describes the results of testing. The sixth section discusses the results and then concludes.

10.1 ARRANGEMENTS FOR PROVISION OF THE BASIC WATER AND SANITATION SERVICES

The Central Government launched the country's first National Programme for Rural Drinking Water (NRDWP) in 1969 (Planning commission 2010). To accelerate the coverage a technology mission, the National Drinking Water Mission (NDWM), was launched in 1986 (MDWS 2015)

The country's first national Programme for Rural Sanitation (CRSP) was launched in 1986 (WSP 2011a). The CRSP was relaunched in 1999 as Total Sanitation Campaign (TSC), in 2012 as Nirmal Bharat Abhiyan (NBA), and in 2014 as Swachh Bharat Mission with an objective to achieve universal rural sanitation coverage by 2019 through community-oriented approach (MDWS 2014). Presently, the Central Government sponsored rural water and sanitation programmes are managed and coordinated by the Ministry of Drinking Water and Sanitation (MDWS).

Subsequent to the 1992 Act, provision of services under these programmes has been progressively devolved to Panchayats (GOI 1999; GOI 2000; Planning Commission 2010).

In Karnataka State, the Panchayats are responsible for the provision of water for drinking and household purposes through construction, repair, maintenance and protection of water facilities (Section 58 of the 1993 Act). Typically, water is supplied by the Panchayats either as a private facility through household taps or as a public facility catering to a group of households through public taps, mini-water tanks, hand-operated tube wells and open wells. As per the norms of NDWM, a minimum of 45 litres of water per capita per day (LPCD) should be supplied; in case of hand pumps there should be one pump for every 250 persons (or 50 households), and the nearest source of water should not be more than 1,600 metres⁴⁴ (MDWS 2015; World Bank 2008b).

For the creation of service facilities Panchayats receives grant from NRDWP with matching contribution from the State Government⁴⁵. The Panchayats located in less developed regions receive special additional developmental grants from the State Government, some components of which can be utilised for creation of service facilities.

To maintain these facilities, the Karnataka Government provides a uniform annual maintenance grant to all the Panchayats; which is presently Rs 1,000 (~£ 10) per tube well,

⁴⁴ WHO norms requires water source to be no farther than 1,000 meters and total collection time to be no more than 30 minutes (WHO 2011:84).

⁴⁵ Panchayats also varyingly receive grants from agencies such as World Bank, routed through the State Government

Rs 5,000 (~£ 50) per mini water tank and Rs 10,000 (~£ 100) per piped water supply scheme (RDPR 2014a).

On the sanitation front, Panchayats' responsibilities include provision of sanitary latrines to not less than 10% of households every year until full coverage is achieved; construction and maintenance of adequate number of community latrines; maintenance of overall sanitation and providing proper drainage facilities; filling up un-sanitary depressions and reclaiming un-healthy localities; and earmarking places away from dwelling houses for dumping refuse (Section 58 of the 1993 Act).

For the construction of the toilets, under the NBA, Below Poverty Line (BPL) households and certain categories of Above Poverty Line (APL) households are eligible to receive financial assistance of Rs 4,700 (~£ 47.00) from the Panchayats (RDPR 2014a). In addition, all the households can receive financial support of Rs 4,500 (~£ 45.00) under MGNREGA program for labor related expenses in the construction of toilets (ibid). The State Government provides additional support of Rs 5,000 (~£ 50.00) to households belonging to Scheduled Caste or Scheduled Tribe for the construction of toilets⁴⁶ (ibid).

For creation and maintenance of the service facilities, the Panchayats can make use of the grant-in-aid funds from the State Government (See Section 1.2.3). Also, the Panchayats have the authority to levy and collect tax for the public service it provides, and appropriate it for creation, maintenance and expansion of these services.

10.2 ACCESS TO BASIC WATER AND SANITATION SERVICES: THE PRESENT STATE

The Section 1.3.3 discussed, in Karnataka State, the demand in rural areas for basic water and sanitation services is very high. The 98% and 85% of the individuals interviewed by this research (individual data; n=373) considered provision of drinking water and sanitation services, respectively, are among the key responsibilities of the Panchayat.

⁴⁶ For revised guidelines see RDPR (2015)

However, the levels of provision of these services by the Panchayat do not adequately correspond to the citizens' needs both in quantity and quality (Section 1.3.3). The reasons for poor provision have been varyingly attributed to high organizational cost and wastage of resources due to multiple overlapping schemes in creation of facilities for service provision; low expenditure on maintenance of the facilities leading to frequent breakdowns and shortening of useful life; poor recovery of the maintenance tariff from the consumer; poor accountability for service provision at the Panchayat level (World Bank 2008b; WSP-World Bank 2012; WSP 2010); poor information about the role of Panchayats in provision of these service among citizens; and in many instances, capture of these services by the local elites (Ban *et al* 2008).

To improve the provision of these services, the measures recommended by above studies include, clarification of roles and responsibilities between various stakeholders involved in service provision, better community participation in all aspects of service provision, mechanisms to reconcile bottom up demand with top-down planning, enhanced accountability of the Panchayats for service delivery and comprehensive oversight of service delivery.

Studies also suggest large supply driven programmes may not be successful as uptake of sanitation services especially, are determined more by socio-cultural norms such as privacy, dignity and status; rather than health benefits or financial cost (see Jenkins and Curtis 2005; O'Reilly and Louis 2014). Also, sanitation services need a community focused approach, as against individual focus, as this provides the mutual support required to overcome certain socio-cultural norms (WSP-MDWS 2014).

Please see Section 1.3.3 for further discussion on this.

10.3 MEASURING LEVEL OF PROVISION OF BASIC WATER AND SANITATION SERVICES

This research first reviewed the 1993 Act to identify the key responsibilities of the Panchayats related to the provision of the services. Then to empirically measure these services it consulted four key sources: World Bank's review of rural water supply in India

(World Bank 2008b), norms for rural water supply and sanitation services specified by the Government of India (MDWS 2012, 2015), guidelines by World Health Organisation for supply of drinking water (WHO 2011), and the guidelines provided by the Ministry of Rural development for provision of water and sanitation services by the Panchayats (MRD-WSP 2012). These sources generally measured the water supply in terms of:

- Creation of facilities: Coverage of households, the number of households sharing a public water source such as a tap and distance of water source from the household.
- Maintenance of the facilities: Frequency of breakdown in supply.
- Availability of water: Quantity of water available per capita per day, time taken to collect it, the number of hours water is supplied per day, the number of days supplied in a week, variation between different seasons and potability (safeness) of the water supplied.
- For sanitation services, the most commonly used measure was the percentage of the households having toilets.

Discussions were held with local experts during exploratory field visit, on contextualising the above measures. In adopting some of these measures research was constrained by the availability of data; time and financial resources; varied forms of delivery mechanisms at the point of access; and field survey being spread across both wet and dry seasons which made it difficult to have measures of water availability as there is wide variance between these seasons.

Informed and constrained by above factors, the research adopted eleven service provision items with an objective to assess both the creation and the maintenance of the service facilities, and these items are listed in Table 10.1. These items were generally applicable to all the Panchayats and sources of finances to provide these services were generally available to all the Panchayats.

To measure these items, the data were gathered through mapping the sampled villages (n=73) within the Panchayats (n=73) (see Section 4.2.1). The 11 items showed internal consistency with a Cronbach's alpha of 0.63. Both factor analysis and linear aggregation

methods were used to create a composite measure of these eleven items, the level of provision of basic water and sanitation services.

Factor Analysis method

As the 11 items were formatively identified, principal component extraction was chosen as the factor analytic method with varimax rotation. Results were examined for possible number of factors, the absence of multicollinearity and factorability of the correlation matrices. There were four components with Eigen >1. The first component explained 25% of total variance. Only the first component was well defined with all the items loading at >0.32, except items 1, 5 and 10 which loaded at 0.19, 0.14 and -0.24 respectively.

The Bartlett's test of sphericity was significant ($p < 0.001$), the Kaiser-Meyer-Olkin (KMO) test value was 0.56 and the average Squared Multiple correlations (SMC) was 0.40. The first component was interpreted as the level of provision of basic water and sanitation services (WSFPAM_F) and it was extracted.

In arriving at the WSFPAM_F the item number 6 was not included in factor analysis to avoid singularity of the correlation matrix, as this item along with items 7, 8 and 9 was the break-up of the single measure, maintenance of water facilities. Arriving at a rank for this measure using all the four items was not an optimal option as it would have reduced the variance of the composite. Also, though the factor loadings in pattern matrix suggested the existence of two dimensions, creation and maintenance of the facilities, they were not well defined.

For these reasons, linear aggregation method was used for arriving at the composite measure and to disaggregate it into measures of creation and maintenance.

Linear aggregation method:

The 11 items were normalised to have a value range between 0 and 1 using min-max method. Then they were linearly aggregated to arrive at the measure WSFPAM_A. The Table 10.1 gives the sign⁴⁷ and the weights used for aggregation. WSFPAM_A was then

⁴⁷ The signs were taken from pattern matrix of the factor analysis.

disaggregated to create measures of the creation of facilities made up of items 1 to 5 (WSFCRE_A) and maintenance of the facilities made up of items 6 to 11 (WSFMAI_A).

10.4 THE MODELS TO TEST THE PROPOSITION

In Chapter Three this research proposed that, at the Panchayat level, better deliberative participation is associated with better provision of services by the panchayat; and now, states it in the form of following hypotheses to empirically test it:

H1: *At the Panchayat level, better deliberative participation in the Grama Sabha meetings (GRAPAR) is associated with better provision of water and sanitation services (WSFPAM) by the panchayat*

$$\delta \text{ WSFPAM} / \delta \text{ GRAPAR} = \beta_1 > 0$$

H2: *At the Panchayat level, better deliberative participation in the Samanya Sabha meetings (SAMPAR) is associated with better provision of water and sanitation services (WSFPAM) by the panchayat*

$$\delta \text{ WSFPAM} / \delta \text{ SAMPAR} = \beta_2 > 0$$

To test these hypotheses the research used the following econometric model.

WSFPAM =	$\beta_0 + \beta_1 \text{GRAPAR} + \beta_2 \text{SAMPAR} + \beta_3 \text{PPRMEN} + \beta_4 \text{PPRNTE} + \beta_5 \text{PSTTOT} - \beta_6 \text{PSTNPR} - \beta_7 \text{VILWME} - \beta_8 \text{VILSTC} - \beta_9 \text{VILBPL} + \beta_{10} \text{VILDEV_L} + \beta_{11} \text{VILLIT} + \beta_{12} \text{PANASS_L} + \beta_{13} \text{PANASP} + \beta_{14} \text{PANRCH} + \varepsilon$
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Informed by the discussions in Sections 1.3, 10.1 and 10.2, and the discussions had with local experts during the exploratory field visits, five vectors of explanatory variables were identified. They measured the characteristics of the Panchayat President, its elected members, its staff and the socio-political-economic context of the Panchayat and the village. Chapter Five provides the measurement and descriptive statistics of these variables.

PPRMEN indicates the gender of the Panchayat President; coded as '1' if male and as '0' if female. Chattopadhyay and Duflo (2004) found, women Presidents invested more in health-related services such as drinking water and visits by health workers, in Panchayats of West Bengal. However, Bardhan *et al* (2010) found, having women Presidents worsened pro-poor targeting of local public goods in Panchayats of West Bengal. This research has shown Panchayats having women Presidents were associated with higher levels of rule of law (Section 9.5)

PPRNTE was the number of terms Panchayat President had served as the President, coded as '1' if >1 term and as '0' if just one term. As re-election could be linked to performance, it was expected to have a positive association with WSFPAM. This research has shown Panchayats having Presidents who have served for more than one term, were associated with higher levels of rule of law (Section 9.5).

PSTTOT was the total number of Panchayat staff, coded as '1' if >1 and as '0' if equal to 1.

PSTNPR was the number of Panchayats the staff was responsible for, coded as '1' if > 1 and as '0' if equal to 1. PSTOT was expected to have a positive association, whereas, PSTNPR was expected to have a negative association with WSFPAM (see Sections 9.4 and 9.6).

VILWME was the number of households served by one waterman. Watermen are the field level Panchayat workers who are largely responsible for the creation of facility at the point of access (for instance, fixing a public tap) and subsequent maintenance of it. Hence it was expected to have a negative association with WSFPAM.

VILSTC was the proportion of village population belonging to Scheduled Caste and Scheduled Tribe, and **VILBPL** was the proportion of the village households categorized as below poverty line. Both were expected to have a negative association with WSFPAM (Section 9.4).

VILDEV_L was the natural log of factor score of number of public service organizations and economic activities in the village⁴⁸.

VILLIT was the average literacy rate at the village level. Higher literacy levels could be associated with better awareness (see Sections 6.5 and 9.6) and hence possibly better demand. Ban *et al* (2008) found, literacy level was not significantly associated with levels of provision of services in South Indian Panchayats This research has shown that Panchayats having higher literacy levels were associated with higher levels of rule of law (Section 9.5).

PANASS_L was the natural log of the number of associations per 1000 people in the Panchayat. For reasons discussed earlier (see Sections 6.4 and 6.6), it was expected to have a positive association with WSFPAM.

PANASP indicates whether Panchayats have received any special developmental grants during the period 2010-2013. As these grants are provided in addition to regular grants, these Panchayats were expected to have levels of WSFPAM at least comparable to other Panchayats; and hence a non-significant or a positive association with WSFPAM.

PANRCH was the total revenue collected per household, by the Panchayat in the year 2012-13. It was expected to be positively associated with WSFPAM.

10.5 THE RESULTS

Four separate models, with WSFPAM_A (Model A), WSFCRE_A (Model B), WSFMAI_A (Model C) and WSFPAM_F (Model D) as the dependent variables, were regressed on, participation in Grama Sabha meetings and participation in Samanya Sabha meetings the hypothesised independent variables; and vectors of variables which measured the characteristics of the President of Panchayat, its elected members, its staff and the socio-economic context at the Panchayat and at the village levels, as the other independent variables.

⁴⁸ Also, this variable strongly correlates with both number of households in the village ($r=0.88$, $p<.001$) and their density ($r=0.46$, $p<.001$). Increase in VILDEV_L score of a village increases the odds of it being a single village Panchayat (Odds Ratio=9.18; Confidence Interval (95%) =2.57-32.66; $p<0.001$). All these could reduce the cost of coordination in provision of services and improve scale economy.

The analysis was performed in Stata v.13 using complete observations in the Panchayat dataset ($n=73$). Table 10.3 displays the regression results along with the correlational statistics and the goodness-of-fit measures. The results were checked for robustness by adjusting the standard error of the estimates to the design effect (see Models A^w, B^w, C^w and D^w in Table 10.3). Rest of this section first describes the results of Model A, followed by that of Model B, Model C, and Model D.

Model A

In Model A, R , the coefficient of multiple correlations was significantly different from zero with the goodness of fit measures, $F(14, 58) = 3.53$; $p < .001$, and R^2 of 0.46. The adjusted R^2 of 0.33 indicates that model explains one-third of the variation.

The deliberative participations in Grama Sabha meetings ($\beta = 0.44$, $p < 0.001$) showed significant positive association with WSFPAM_A. This result fails to reject the hypothesis H1. However, participation in Samanya Sabha ($\beta = 0.05$, $p = 0.82$) was not associated with WSFPAM_A and hence this result rejects the hypothesis H2.

Among characteristics of the Panchayat President, Panchayats with men as Presidents showed lower levels of services, though not significant. However, this assumed significance when the model was adjusted for the design effect (Model A^w; $\beta = -3.64$, $p < 0.05$). Contrary to expectation, Panchayats with Presidents who have served for more than one term though showed expected sign of association, it was not significant.

Among characteristics of the Panchayat staff and workers, number of staff and additional responsibilities of other Panchayats though showed expected signs of association with the levels of services, the associations were not significant. As expected, in villages which had less number of watermen ($\beta = -0.25$, $p < 0.05$) as a proportion to the number of households, the levels of service were also significantly lower.

Among village level characteristics, villages which had a higher proportion of Scheduled Caste and Scheduled Tribe population ($\beta = -0.32$, $p < 0.01$) and a higher proportion of below poverty households ($\beta = -0.24$, $p < 0.05$), as expected, showed significantly lower levels of

services. However, association with VILBPL was sensitive to high leverage scores. The villages which had a higher number of public organizations and higher economic activity and higher levels of literacy did not show significantly different levels of services.

Among Panchayat level characteristics, villages of the Panchayats, which received additional development grants, those which had a higher number of associations per 1,000 citizens and where revenue collection per household is higher; did not show significantly different levels of services. However, association with gained significance after adjusting the model for the design effect (Model A^w; $\beta = 1.99$, $p < 0.05$).

Model B

The level of the creation of water and sanitation facilities did not show significant association with participation in Grama Sabha as well as Samanya Sabha meetings.

The creation of facilities was significantly lower in Panchayats which had men as President ($\beta = -0.28$, $p < 0.05$) and in Panchayats which had received special development grants ($\beta = -0.24$, $p < 0.05$). However, after adjusting the model for design effect (see Model B^w), association with gender and panchayats from backward regions lost significance; and association with the number of terms President has served ($\beta = 0.36$, $p < 0.05$) and literacy levels ($\beta = 1.36$, $p < 0.05$) gained significance.

Model C

The level of maintenance of water and sanitation facilities did show a significant positive association with participation in Grama Sabha meetings ($\beta = 0.44$, $p < 0.001$), however, not so with participation in Samanya Sabha meetings.

Maintenance was significantly poorer in villages, which had less number of watermen ($\beta = -0.27$, $p < 0.05$), which had a higher proportion of Scheduled Caste and Scheduled Tribe population ($\beta = -0.32$, $p < 0.01$), and which had a higher proportion of below poverty households ($\beta = -0.24$, $p < 0.05$). However, association with VILBPL was sensitive to high leverage scores. When the model was adjusted to design effect (see Model C^w), villages of the Panchayats with men as Presidents ($\beta = -3.36$, $p < 0.05$), showed significantly lower levels of maintenance of services and the number of associations per 1,000 population of

Panchayat ($\beta = 1.88$, $p < 0.05$) showed significant positive association with levels of maintenance of services.

Model D

Factor analytically derived measure of level of provision of services did show significant association both with participation in Grama Sabha ($\beta = 0.25$, $p < 0.05$) as well as Samanya Sabha meetings ($\beta = 0.23$, $p < 0.05$). However, association with Samanya Sabha meetings was sensitive to clustering effect at the district level. Contrary to the results of the Model A, which used the linearly aggregated measure; in Model D, Panchayats with Presidents having served more than one term ($\beta = 0.20$, $p < 0.05$) and having higher number of staff ($\beta = 0.21$, $p < 0.05$) were associated with higher levels of services.

10.6 THE DISCUSSION

This chapter using Panchayat and village level data empirically tested the hypothesis that: better deliberative participation in Grama Sabha and Samanya Sabha meetings is associated with better provision of basic water and sanitation services by the Panchayat. It then disaggregated provision of services into creation of the service facilities and maintenance of these facilities and further investigated whether better participation was associated with better creation and better maintenance.

The results show that better participation in Grama Sabha meetings was significantly associated with, better provision and better maintenance of the service facilities; however, association with the creation of service facilities though positive was not significant. The better participation in Samanya Sabha meetings was associated with better provision, better creation and better maintenance of the service facilities; however, these associations did not approach significance level.

These results suggest, creation and maintenance of the facilities are possibly determined by different processes, and Grama Sabha and Samanya Sabha may possibly play different roles in these.

The possible explanation for the non-significant association of participation, either in Grama Sabha or Samanya Sabha, with the creation of facilities, is perhaps, the creation is determined more by factors external to the Panchayat (see Section 10.1). This is because, with tax revenue raised by the Panchayats constituting just about 9 % of their total revenue, and large proportion of their statutory grant-in-aid being deducted at source by the State Government for paying Panchayats' electricity bills; the Panchayats are dependent on the developmental grants from the Central and the State Governments for providing local public services including basic water and sanitation services (Natraj *et al* 2014:93, see Rao 2004; Section 1.2.3; Section 1.3.1). In developmental grants, the identification of the service facilities for creation, and the allocation of the funds for it are determined by top-level decision-making at the Central and State Governments levels which reflect priority at those levels; rather than through consultation at the local Panchayat level (see World Bank 2008b). Hence participation in Panchayat meetings may not be very relevant in determining the creation of services facilities.

On the contrary, the maintenance of the available facilities is the responsibility of the local Panchayats; and all the Panchayats get uniform maintenance grants from the Karnataka Government (see Section 10.1). Hence the variation in the levels of maintenance can be due to factors internal to the Panchayats. The result that better participation in Grama Sabha was significantly associated with better maintenance of water and sanitation services; seem to substantiate this interpretation (see Model C). Implications of this result are two:

First, the result complements the findings by other studies that, local participation in provision of local public service improves: quantity and quality of the services (Heller *et al* 2007; Ghatak *et al* 2002; Mansuri and Rao 2013) improved access (Bardhan 2006; Besley 2005; Olken 2010), uptake of services (WSP 2010; WSP-MDWS 2014; O'Reilly *et al* 2014); maintenance of the services (Khwaja 2004) and overall sustainability of the services (World Bank 2008b).

Second, the result possibly suggests, the Grama Sabha may provide the institutional mechanism for some of the key determinants of better water and sanitation services as identified by the above studies. For instance:

1. O'Reilly and Louis (2014) found a concerted action by actors at the levels of the Local Government, the civil society associations and other Government departments is essential to achieve optimal service levels. Grama Sabha by design provides a common platform to engage local citizens, members of local association, elected member of Panchayat, officials from the Panchayat and officials from the local offices of related Government Departments, in a repetitive manner, to identify the common service needs of the community and facilitate provision of them by the Panchayat (Section 1.2.4).
2. Ban *et al* (2008) observed, measures to improve information among citizens on the responsibility of the Panchayats for the provision of these services can reduce elite capture and improve service outcomes in villages. This research showed individuals who participate more frequently in deliberative meetings of the Panchayats were associated with better levels of information on availability of the services and the rules governing their provision, withdrawal and management (Sections 6.5 and 6.6; see also Banerjee *et al* 2015 on role of information in improving access to local public goods). Fujiwara and Wantchekon (2013) showed, public deliberation by increasing information level on policies among citizens can reduce clientelistic practices.
3. A study by World Bank (WSP-World Bank 2012) found, building the capacity of the community and that of Panchayat officials in managing their roles and responsibilities in planning, provision and oversight of services, was associated with lower cost, adequate provision, improved tariff collection, better maintenance and better sustainability of the services. Isaac (2005) reports, the participatory processes of Panchayat has empowered women representatives, in terms of knowledge of rules, regulation and processes; public speaking, managing public interaction, conducting meetings and planning Panchayat activities. Also, this research showed, individuals who participated in Panchayat meetings where the quality of discussion approximated

the deliberative norms, were associated with higher levels of politically competent feeling. This increases their propensity to communicate their views effectively in a participatory setting; as they feel Panchayat is responsive to their needs and their efforts to influence its functioning (Sections 7.5 and 7.6). Avritzer (2000) showed public deliberation improved democratic skills such as negotiation, forming coalitions and conception of justice among participants.

4. Another study by World Bank (WSP 2010) found, the collective action at the community level is an effective mechanism to overcome barriers of socio-cultural norms related to water and sanitation services. Such an action by focusing on the community as a whole, as against on an individual (WSP-MDWS 2014) provides the appropriate social sanctions and peer to peer social support necessary to overcome these norms (O'Reilly and Louis 2014). This research showed, when discussions in the meetings of the Panchayat are regulated by deliberative norms (Section 3.2) it can be associated with an integrative, solidary and purposive motive among participants with a willingness to identify, understand and support each other's needs, concerns and values (Sections 8.5 and 8.6; see also Section 2.3).
5. World Bank (2008b) after an extensive review of water supply projects in rural areas stressed on the need to improve the accountability of the Panchayat at the operational level for better service delivery (see also Ban *et al* 2008 for similar observation). This research showed, better participation in Grama Sabha was associated with better adherence to the operational level rules related to planning, implementation, review and oversight and grievance redress of the services (see Sections 9.5 and 9.6).

The non-significant association of Samanya Sabha with the maintenance of facilities can be possibly due to two factors. Samanya Sabha shares the dual responsibility of; a policy making collective choice institution as well as policy administering operational level institution depending upon the context (see Sections 1.2 and 2.3). In the context of maintenance of facilities, its role is, perhaps, more administrative in nature and is performed under the oversight of the Grama Sabha. Also, the institutional design of Samanya Sabha, in comparison to that of Grama Sabha, conforms less to the antecedent conditions desired for optimal public deliberation (see Sections 3.3.1, 3.3.2 and 3.5).

Lower levels of both maintenance and provision of services in villages with a higher proportion of disadvantaged population possibly suggest the low political weight of these groups, despite the higher demographic weight and proportional political representation in Panchayats, in getting their fair share of local public health goods (see Bardhan *et al* 2004:972). This feeds to the concerns of internal exclusion in settings where participation is enforced externally through reservations (see Young (2000) in Section 3.5). This result also fits with the larger body of literature on the negative effect of social fragmentation on public good provision (Alesina, Baqir and Easterly 1999; see also Banerjee and Somanathan 2007; Mansuri and Rao 2013).

Similarly, lower levels of creation of services in Panchayats located in less developed regions, despite receiving additional developmental grants, possibly suggest lower bureaucratic capability to convert grants to public good outputs (see Huber and McCarty 2004). Also, as Mansuri and Rao (2013) argued, such injection of large funds can attract the attention of the elites, thereby making opportunistic collusive behaviour through the exclusion of the vulnerable, more likely (see Bardhan *et al* 2010, 2004 for similar views).

Above results support the observation by Mansuri and Rao (2013) that higher levels of service provision may not necessarily be associated with better equity in allocation of these services (see Bardhan and Mookherjee 2001 for similar views). These results also suggest mere political reservation of offices for disadvantaged communities, or provision of a higher amount of grants to overcome backwardness; without addressing the underlying reasons may not be optimal solutions on their own (see Dreze and Sen 1989; see also North 1990 for the persistent effect of cultural institutions on public good provision).

Finally, results also seem to suggest Panchayat with women as Presidents were associated with the higher overall level of services as well as creation and maintenance of service facilities. This furthers the debate on the usefulness of reservation of political offices for women (see Section 1.3.1). It also adds to the debate on autonomy for policy making and influence of identity of policy maker on the policies, in the context of Panchayats.

In summary, this chapter showed better participation in Grama Sabha meetings can be associated with better maintenance and better levels of provision of the water and sanitation services by the Panchayat. Creation of the service facilities, however, seems to be disconnected from the local participatory process and reflects, possibly the priorities of the higher level Governments. The reduced levels of maintenance and provision as the vulnerability of the citizens increase raise concerns on the effectiveness of the participatory processes in ensuring equity in the allocation of the services.

Table 10.1: The list of items used to Measure the Water and Sanitation Services

	Items	Descriptive Statistics		WSFPAM_A	WSFPAM_F
		Mean	SD	Weight	Factor loadings
A Provision of services					
1	Adequate access to public water supply ¹	3.96	2.88	*1	0.19
2	Proportion of households having water taps provided by Panchayats in their premises	0.42	0.25	*1	0.23
3	Proportion of households having toilets in their premises	0.35	0.20	*1	0.42
4	Number of garbage bins available for every 50 households	0.07	0.27	*1	0.62
5	Percentage of public water supply access points having concrete platforms around them for better hygienic condition	0.65	0.27	*1	0.14
B Maintenance of services					
6	Proportion of public water supply access points in not working condition	0.18	0.21	*(-1)	Dropped
7	Proportion of public water supply access points in working condition but maintained very poorly ²	0.04	0.11	*(-0.5)	-0.57
8	Proportion of public water supply access points in working condition but maintained poorly ³	0.34	0.28	*(-0.25)	-0.76
9	Proportion of public water supply access points in working condition and maintained well ⁴	0.44	0.27	*1	0.77
10	Number of times public water supply was discontinued due to breakdown during last summer (April-May 2013)	0.78	1.31	*(-1)	-0.24
11	Number of garbage dumps in the village for every fifty households	0.64	0.58	*(-1)	-0.50
¹ Calculated as : (Public water supply access point * number of households it is expected to serve (see Section 10.1)) * Total number of access points in the area mapped/ number of households in the mapped area					

² Very poorly maintained: 1. It is very difficult to pump out/draw water. 2. There is no platform around the water point 3. There is no drain for water to flow out nor is there leach pit. 4. There is dirty stagnating water around the water point

³ Poorly maintained: 1. It is difficult to pump out/draw water. 2. The platform around the water point is need of repairs. 3. The drain is clogged. 4. Or Leach pit is present but not properly maintained

⁴ Well maintained: 1. Water point is in good condition and is easy to pump out/draw water. 2. The platform around the water point is in good condition. 3. There is a facility for water to flow to the drain. 4. Or it has leach pits which are in good condition

Table 10.2: Descriptive Statistics of the Dependent Variable (WSFPAM)

Variable label	Minimum value	Maximum value	Mean	Standard deviation	Skewness
WSFPAM_A	-25.06	2.89	-7.15	7.57	-0.48
WSFCRE_A	0.55	3.02	1.72	.59	-.10
WSFMAI_A	-25.61	1	-8.88	7.34	-0.44
WSFPAM_F	-3.18	1.63	0	1	-0.87

Table 10.3: Results of Regression Analysis

Variable name	WSFPAM_A					WSFCRE_A		WSFMAI_A		WSFPAM_F	
	Model A				Model A ^W	Model B	Model B ^W	Model C	Model C ^W	Model D	Model D ^W
	<i>r</i>	<i>pr</i>	β	<i>t</i>	β^A	β	β^A	β	β^A	β	β^A
GRAPAR	0.41	0.39	0.44***	3.21	0.95***	0.14	0.02	0.44***	0.93***	0.25**	0.06**
SAMPAR	0.19	0.05	0.05	0.40	0.24	0.16	0.05	0.04	0.18	0.23**	0.20
PPRMEN (Dummy)	-0.11	-0.18	-0.15	-1.36	-3.64**	-0.28**	-0.28*	-0.14	-3.36**	-0.26**	-0.73***
PPRNTE	0.18	0.18	0.15	1.37	3.13	0.17	0.36**	0.14	2.77	0.20**	0.61***
PSTTOT (Dummy)	0.12	0.20	0.17	1.53	1.06	0.02	0.17	0.17	0.88	0.21**	0.47**
PSTNPR (Dummy)	-0.03	-0.14	-0.12	-1.11	-1.18	-0.09	-0.25	-0.12	-0.94	-0.19*	-0.52
VILWME	-0.19	-0.26	-0.25**	-2.05	-0.01**	0.09	0.00	-0.27**	-0.01**	-0.11	-0.00
VILSTC	-0.30	-0.35	-0.32***	-2.85	-15.51***	-0.12	-0.25	-0.32***	-15.26***	-0.30***	-1.99**
VILBPL	-0.10	-0.27	-0.24**	-2.18	-6.17**	-0.09	-0.21	-0.24**	-5.96**	-0.24**	-1.13***
VILDEV_L	-0.04	0.11	0.11	0.87	0.99	-0.06	-0.05	0.12	1.05	0.10	0.11
VILLIT	0.35	-0.04	-0.03	-0.28	-9.53	0.22*	1.36**	-0.05	-10.90	0.04	0.17
PANASS_L	0.31	0.22	0.19*	1.72	1.99**	0.18	0.11	0.18	1.88**	0.22**	0.23*
PANASP (Dummy)	-0.25	-0.08	-0.07	-0.64	0.46	-0.24**	-0.33*	-0.05	0.79	-0.13	-0.19
PANRCH	0.24	-0.15	-0.15	-1.18	-0.004*	-0.01	0.00	-0.15	-0.004*	-0.03	0.00
Constant ^A	-	-	-3.04	-1.35	-5.71	1.03*	0.94	-11.1	-6.66	-0.76	-0.22
Adjusted R ²	0.33				R ² =0.41	0.30	R ² =0.45	0.30	0.39	R ² =0.47	R ² =0.57
F-statistic	F(14, 58) = 3.53; p<.001										
n	73				5,679 ^B	73	5,679	73	5,679	73	5,679
<i>r</i> :Pearson’s coefficient of linear correlation; <i>pr</i> : partial correlation coefficient; β :standardised regression coefficient; <i>t</i> : t-statistic; *** significant at ≤ 1 percent; ** significant at ≤ 5 percent; * significant at ≤ 10 percent											
^A β is not standardised; ^B This differs from actual number of Panchayats by .004%; ^W Model is weighted for design effect											
In Model A: PANASS_L was sensitive to outliers in residuals; VILBPL was sensitive to high leverage scores											
In Model B: PANASS_L was sensitive to outliers in residuals; PANASS_L and PANASP were sensitive to high leverage scores and multivariate outliers											
In Model C: PANASS_L was sensitive to outliers in residuals; VILBPL was sensitive to high leverage scores											

CHAPTER 11: DOES DELIBERATIVE PARTICIPATION MATTER? CONCLUSIONS

This research set out to investigate the role of deliberative participation in improving access to basic water and sanitation services in the context of Panchayats, the rural Local Governments of India. The motivation came from the health, social and economic implications of poor access to these services. The purpose was to inform policies aimed at improving access to these services. The approach was deductive through empirically validating the theoretical assertions that local participation can improve correspondence of provision to local needs, and deliberation can improve the capability of the individuals to act collectively.

This concluding chapter pulls together the key results of this research and discusses how it can inform policy and contribute to the knowledge base. While doing so, it draws attention to certain limitations in the interpretation of the results and suggests directions for further research. It is organised as follows.

The first section briefly summarises the key results. The next section relates the results from a policy perspective to the key issues in the performance of Panchayat raised in Chapter One. The section following this discusses how the results feed to the analytical framework and the theoretical arguments made in Chapters Two and Three. The penultimate section discusses the limitations in the interpretation of the results and suggests directions for further research. The final section concludes.

11.1 DELIBERATIVE PARTICIPATION AND LOCAL PUBLIC HEALTH GOODS: SUMMARY OF THE RESULTS

Access to basic water and sanitation services, the local public health goods, is a human right and a public health necessity. Provision of these services is typically devolved to Local Governments to ensure they correspond to the local needs. In rural India, such a correspondence is sub-optimal, with high local needs and poor provision by the Panchayats. The citizen participation in Panchayat's public deliberative meetings, the Grama Sabhas is weak. The community context is characterised by poor information about

Panchayat's role in the provision of these services, social fragmentation, socio-economic inequality and routine marginalisation of certain social groups in day to day social-economic-political activities (Chapter One).

Against this background, the research asked *whether and how better participation in deliberative meetings of the Panchayats can be associated with better provision of basic water and sanitation services by the Panchayats.*

To answer, the research adopted a deductive approach. It used Institutional Analysis Development (IAD) framework to construct pathways associating participation with the provision, and deliberative theories to explain the role of participation in these pathways.

To empirically test these pathways, the research used a three staged systematic sampling method. Using correlational field survey design it gathered primary data from 99 panchayats in Karnataka State, and from 99 villages and 396 individuals within these Panchayats. Then it employed factor analytic and multivariate regression techniques to analyse the data using the statistical software Stata® v.13 (Chapter Four).

The results show that in Panchayats where Grama Sabha meetings were better participated and conducted more regularly; the levels of provision of water and sanitation services and the maintenance of their facilities were also better (Chapter Ten). The better participation was measured as the higher number of people, from different strata of the community, meeting more frequently, in a public space; where the discussions approximate to the deliberative norms (reciprocal, pro-social and accountable), and the decisions taken have a common good orientation (Chapter Five).

Further analysis suggested two possible explanations for this association ([See Figure 11.1 for a schematic representation of this](#)):

First, individuals who attended higher number of deliberative meetings of the Panchayat and where the quality of discussion approximated to the deliberative norms were associated with:

1. *Higher levels of information* about the availability, accessibility, withdrawal and management of the water and sanitation services. This can possibly enable individuals to better articulate their preferences for these services (Chapter Six).

2. *Higher levels of external political efficacy*, meaning these individuals feel politically competent in that it is important for them to participate, as their opinion does matter and Panchayat is responsive to them. Such an efficacious feeling enables individuals to engage more evenly in a participatory setting having participants from different socio-economic statuses. This can possibly increase their propensity to communicate their articulated preference more effectively with a 'louder voice' (Chapter Seven).

3. *Higher levels of sense of community*, meaning these individuals show an integrative solidary motive with a cooperative goal. To achieve this goal they coordinate their strategies to find mutually acceptable preferences and actively seek convergence in the presence of heterogeneity. This shared understanding provides a cohesive common base for collectivising the communicated preferences in a manner which benefits the largest section of the community and frame it as a collective demand, through policy objective, for provision (Chapter Eight).

Second, Panchayats, where Grama Sabha meetings were better participated and conducted more regularly, were associated with

4. *Higher levels of rule of law* in operations of the Panchayat related to service provision.

This suggests, rule-bound conversion of policy objectives into actual service outputs; a reflection of responsiveness and accountability of the bureaucratic action in achieving administrative commitment to the legislative goals.

In conclusion, above results suggest better deliberative participation can be associated with better capability of the individuals to engage in collective action. This can improve the correspondence between their needs and the provision by the Panchayat; by strengthening individuals' collective demand for the services and by improving the responsiveness of the Panchayat in the supply of these services.

Results also show apart from deliberative participation, certain local factors too influence the provision of water and sanitation services. The Panchayats which had a higher number of watermen were associated with higher levels of provision of services and better maintenance of their facilities. Also, as the proportion of disadvantaged population increased, the levels of provision of services and the maintenance of their facilities decreased. Finally, levels of creation of facilities were higher in Panchayats having women as Presidents; and lower in Panchayats located in less developed regions of the State despite the additional developmental grants.

11.2 PANCHAYATS: FROM PROMISE OF HOPE TO PERFORMANCE; THE POLICY IMPLICATIONS OF THE RESULTS

Ever since the passage of the 1992 Act, there is an active popular debate on the optimality of local public services provided by the Panchayats. Some of the key issues in the debate are: functionality of the Grama Sabhas, inclusiveness of the disadvantaged groups in local governance, the extent of control Panchayat has over its policies and programs, and probity of its officials (Chapter One). This section briefly discusses, how the results of this research inform these debates.

On functionality of the Grama Sabhas

The 1992 Act envisaged Grama Sabhas to serve as the bedrock in the functioning of the Panchayats, with an instrumental as well as a substantive role. The instrumental role was to identify the common feasible local public service needs of the community, communicate it to the Panchayat and then exercise oversight over its provision. The substantive role was to improve capabilities for local governance among its participants through: educating in administrative and political processes, improving political awareness, strengthening developmental orientations, enabling the disadvantaged sections to progressively assert their point of view and inculcating the community spirit.

The results that, better Grama Sabha meetings were associated with the better provision and better rule of law on one hand and on the other, its participants were

associated with better information about Panchayat's operations, better 'voice' and better sense of community; not only validates its conceived roles but also its capability to perform those roles.

This gains salience in the light of increasing inclination by both the Central and the State Governments to devolve local public service functions to Panchayats and strengthen the role of Grama Sabha. However, the key challenges are in improving the participation and achieving equity in access to local public health goods both within the community and between the regions. [Towards this, the research makes the following recommendations:](#)

1. [Regularly convene all deliberative meetings of the Panchayat as provided for in the 1993 Act. Incentivise participation in these meeting by different sections of the community.](#)
2. [Provide the participants with adequate, relevant, factual and accessible information on the agenda topics of the meetings.](#)
3. [Use Ward Sabha meetings as enclave deliberative meetings for the disadvantaged sections, as to provide an opportunity for their suppressed voices to emerge.](#)
4. [Moderate the discussion in the meetings such that
 - a. \[Topics deliberated are relevant to the larger section of the community and not just to a particular group or person.\]\(#\)
 - b. \[The strength of the reasoning is taken as the basis for considering the suggestions/opinions rather than who proposed it or how many.\]\(#\)
 - c. \[Decisions taken on the topics have common good orientation.\]\(#\)](#)
5. [Faithfully record the minutes of the meeting with adequate details and take the signature of all the participants endorsing these minutes.](#)

On inclusiveness in local governance

The preamble to the 1992 Act noted there is an insufficient representation of the disadvantaged groups like Scheduled Castes and Scheduled Tribes in the Panchayats. To have a more representative social base, the Act reserved political offices for these groups in proportion to their population. The premise was reservation and hence representation

can facilitate group's interests/needs to find an expression in policies of the Panchayat leading to better targeting of the local public goods to these groups. The effectiveness of this policy has been extensively analysed in literature with varying results.

The results of this research show, both provision and maintenance of the water and sanitation services were lower in villages with a higher proportion of the disadvantaged population. This possibly suggests their political weight does not correspond to their demographic weight despite reservation. This also raises concerns about the effectiveness of the participatory processes in ensuring equitable allocation of goods. However, the absence of lower levels of rule of law in Panchayats with a higher proportion of disadvantaged population possibly suggests mechanism other than non-adherence to the rules (as in corruption) for the skewed levels.

Also, individuals from Panchayats with a higher proportion of disadvantaged population showed lower levels of external political efficacy possibly suggesting perceived lack of responsiveness of Panchayats to their needs, despite the higher number of their elected representatives. However, it is not possible to corroborate these findings due to ecological fallacy in reasoning, as they are at different levels.

The lower levels of availability of services in villages of the Panchayats located in backward regions despite receiving additional grants possibly suggests lower bureaucratic capability to convert grants into actual public good outputs. The absence of similar association with the rule of law makes elite capture as the less likely interpretation.

Above results suggest mere political reservation and provision of additional grants without addressing the underlying causal factors may not be an optimal solution on their own to improve inclusiveness and equity in access to services.

On extent of control the Panchayat has over its policies and programs, and probity of its officials

The variations in levels of provision of water and sanitation services among different Panchayats, even though they have the same institutional design and arrangements,

possibly suggest reasons other than control for the less than the adequate provision of services.

However, the result that the participatory processes were not associated with levels of creation of the service facilities suggests (Section 10.6), the developmental grants from higher levels of Government, on which Panchayats are dependent to provide these services, reflects priorities at those levels as against priorities at the local level. This makes the role of participatory processes less relevant in determining what is/what should be available in correspondence to the local needs. This in some ways feeds into the debate, the control Panchayat has over its policies and programs, in a broader context. This result supports the concern expressed by other studies on the need to reconcile bottom-up preferences with higher level decision making for better correspondence between the services provided and the local needs.

The lower levels of creation of service facilities and the lower levels of rule of law in Panchayats with men as President add to the concerns on the probity of its officials. This result has two further implications. First, it suggests, Panchayats can have control over its policies and identity of the policy maker can influence the levels of provision of the local public services. Second, it adds to the debate on the effectiveness of reservation of political offices for women.

11.3 PARTICIPATION, DELIBERATION AND LOCAL PUBLIC HEALTH GOODS; THE THEORETICAL IMPLICATIONS OF THE RESULTS

This section briefly discusses how the results feedback to, the analytical framework used in constructing the pathways associating participation with the provision of services and the theoretical arguments made to explain the role of participation in these pathways.

There is a wide consensus on the economic argument, based on the theories of fiscal federalism, that, given the 'localness' of the area of benefit and the variations in preferences, decentralisation of the provision of local public goods to the Local Governments can improve the correspondence between the preference and the provision.

However, in the allocation of these goods by the Local Governments, the answers to the political question of who should get what, when, who decides and how are contentious. The proponents of the local governance argue that the participatory institutions can help to find answers to this question by providing a mechanism to collectively engage citizens in identifying their common feasible service needs in a responsive manner, communicate it to the Local Government, and then exercise oversight, to ensure accountability in provision and allocation of these services.

The decentralisation of the provision of the local public health goods to the Panchayats following the failure of centralised planning and delivery approach; the constitutional mandate to create Grama Sabhas; and the result of this research that better participation in Grama Sabha meeting was associated with better levels of service provision, broadly support the above arguments.

However, political-economists express concerns about the capability of the Local Governments to ensure equity in the allocation of the goods in the context of social fragmentation and high socio-economic inequalities. In such a context, they explain, distribution of the capability to engage evenly in participatory situations parallels that of the socio-economic resources. As a result, the outcomes of participation and its allocation could be skewed in favour of the individuals with better capabilities to engage with a louder voice, whereas, the cost of participation diffuses to all. This skewed cost-benefit realization more often than not leads to the sub-optimal performance of participatory institutions.

The community setting of the Panchayats reflects such a societal context. The result that levels of service provision were lower in villages with a higher proportion of disadvantaged population feeds to these concerns. This also supports the concerns of 'internal exclusion' of the disadvantaged section in participatory situations through various means; even though their participation is enforced through external legislative mechanisms such as reservation (see Section 3.5).

This research argued, increased participation in public deliberative meetings where the quality of discussion approximates the deliberative norms, improves the capability of the individuals to engage evenly in participatory processes, independent of their socio-economic resources. In other words, greater participation by the citizens can transform the distribution of these capabilities from cumulative to more linear in the community. This argument takes root in the long-held tenet of deliberative participation theories that the outcomes of participation includes not just policies but also improved psychological, social and political capabilities of the individual participants.

The norms of deliberative participation require, equality of opportunities: to participate, to propose preferences and to deliberate on others' preferences in a non-dominant manner; all major preferences in the community to be communicated and considered; adequate, relevant, factual and accessible information on these preferences to be provided; the strength of the reason as the criteria for considering the preference rather than who made it or how many; respect for opposing views; equal rights in collective decision; and that these deliberations happen in a public sphere in an accountable manner.

The participatory theorists argue that the observance of the above norms can improve participant's democratic skills, and also the civic integrity and civic management in the conduct of powerful local elites such as the President and the bureaucrats of the Panchayat. This can be perceived by the participants as responsiveness to their suggestions needs during their efforts to engage in local governance. The theorists also argue that these norms can have an integrative effect on the participants through creating awareness that one is a member of the wider community and that pursuing of ones' interest will be within the overarching interest of the community. Such awareness aids acceptance of collective decisions as they perceive not only the common decision is their decision, but that it partly depends on their exertions too. This solidary motive incentivises participants to adopt a reciprocal cooperative behaviour by finding preferences and offering justifications which are mutually accessible and acceptable, and seek convergence when they are heterogeneous.

The results of this research that, those individuals who participated more frequently in deliberative meetings and where discussions approximated the deliberative norms were associated with higher levels of information (Chapter Six), external political efficacy (Chapter Seven) and sense of community (Chapter Eight) strongly supports the above theoretical arguments.

The results also show that the levels of above capabilities, be it information, external political efficacy and sense of community; were not different in individuals belonging to the disadvantaged groups. This supports the argument made by this research that the deliberative participation by the citizens can lead to a more linear distribution of the capacity to engage in the community.

Theorists further argue, when deliberative participation as described above happens repetitively, it promotes responsible social and political action from the individuals due to three reasons. First, by, deterring narrow self-interested preferences through social sanctions and promoting broad-interest common good preferences through recognition. Second, by making the link between the talk and the outcome explicit; it makes talk costly and hence commitment to it more credible. Third, by clearly specifying who is accountable, for whom, for what, how and why. These actions can increase faith in the system and allegiance to the rules; which can enhance the credibility of bureaucratic action in achieving administrative commitment to the legislative goals. The result that better deliberative participation is associated with better rule of law (Chapter Nine) substantiates these arguments.

The above discussion shows, the results of this research supports and validates the theories related to the political economy of the local public good provision on one hand, and the theories on deliberative participation, on the other. This empirical demonstration of the explanatory capability of these theories in the context of Local Governments in India; enhances their relevance and applicability in other similarly placed lower and middle-income countries.

Finally, the results add to the rich body of evidence which shows that IAD framework can be a versatile tool for empirical analyses of the institutional arrangements of the organizations. Being rooted in New Institutional Economics it relaxes certain assumptions of neo-classical economics such as perfect information and frictionless exchange, and allows for assumptions such as bounded rationality. Its conception of the institution as a framework of rules and norms to govern collective behaviour, allows for modelling of different kinds of institutions. Its flexibility to disaggregate the institutional arrangements allows selection of only those institutions relevant to the research context for in-depth analysis. Lastly, by providing scope for inclusion variables in the model which are exogenous to the organisation, it allows for analysis of institutional performance in the broader socio-economic-political context. All these features facilitated the construction of pathways to associate participatory institutions with the provision of local public health goods using theoretical constructs from multiple, albeit related, disciplines.

11.4 LIMITATIONS OF THIS RESEARCH

Most of the limitations of this research arose primarily because of the constraints in the availability of the Panchayat data.

1. Variations in the availability of the Panchayat data for the years previous to 2012-13 constrained research from adopting a more robust difference-in-difference design, and instead, had to settle for correlational cross-sectional design. This meant, the implied direction of influence while testing the hypotheses at the Panchayat level were associational than causal.

2. In the year for which Panchayat data was collected (2012-13), the extent of item missing data was 5-7% across the observations, depending on which variables were considered. The pattern of missing suggested it was more often seen in Panchayats from less developed regions of the Karnataka State. The research adopted a complete case approach while analysing the data. As a result, Panchayats with missing data were left out of the analysis. This may have introduced bias in results and reduced the external validity of the results. Also, this approach reduced the effective Panchayat sample size from 99 to 73. As

a result, the regression models at Panchayat level (Chapters Nine and Ten) could not be fully specified due to fewer degrees of freedom.

However, the descriptive statistics of the total sample of Panchayats (n=99) did not differ much from that of those included in the analysis (n=73); and the results of the models adjusted for this design effect were more or less consistent with the results of the non-adjusted models. Moreover, the primary intent of this research was to establish internal validity of the propositions within the sampled observation.

3. While testing the hypothesis which examined for an association between deliberative participation and provision of basic water and sanitation services (Chapter Ten), the research could not adequately control for Panchayat's finances. This was due to variations in the availability of data on Panchayat's finance and the complexity of the form in which it was available. The research attempted to overcome this constraint by choosing measures of water and sanitation services which are largely invariant to the variances in Panchayat's finances. However, the measurement of these services was constrained due to factors explained in Section 10.3. In the same model, research also could not adequately control for possible confounders such as political competition and nature of distribution of economic assets among citizens of the Panchayat.

4. Participation in deliberative meetings of the Panchayats is mandatory for all the categories of the individuals interviewed in this research (President, elected member and bureaucrats) except for the citizens. Hence, for the hypotheses made at the individual level, establishing the presence of a linear association between the outcome variables and the deliberative participation was more relevant and practically feasible. Also, literature suggest the relationship between participation, and capabilities such as political efficacy and sense of community reinforce each other; thereby making it difficult to establish which is primary in relation to the other.

5. The research sampled only four individuals from each Panchayat. Hence because of the possible small effect size, research did not statistically test the pathways which it had

suggested to explain the association between deliberative participation and provision of local public health goods.

6. Finally, for measuring constructs related to the functioning of the Panchayat, such as rule of law, research had extracted data from the records maintained at the Panchayat office. There is a perception that some of the data in these records might have been doctored/falsified/alterd for various reasons in some Panchayats. This research conscious of this possibility has tried to minimise this source of error by purposefully choosing to measure these constructs across a large number of dimensions and validating the data using different sources of records where available.

11.5 DIRECTIONS FOR FURTHER RESEARCH

This perhaps is one of the first few empirical studies which has comprehensively measured deliberative participation and tested for its multiple associative benefits, in the context of lower and middle income countries. Similarly this is also possibly among the few studies, in the context of local governance, which explicitly modelled participation as collective action, systematically tested for its association with the local public services and then provided an explanation as how they could be associated using both empirical as well as perception-based measures, in the same sample. By this, it hopes to have provided, both a basis as well as a starting point for studies which aim to research deliberative participation or examine access to local public services. Following are some of the ways by which the purpose of this research can be furthered:

1. It will be useful to replicate this study without the limitations faced by it. Possible ways to overcome some of the limitations can be:

- To overcome the selection bias, Panchayats can be stratified along four distinct revenue regions of Karnataka, and then Probability Proportional to Size (PPS) approach can be used for sample them.
- To adequately address the issues related to confounders and temporality, the difference-in-difference design can be employed. For the individual level analysis,

individuals who have never participated in the Panchayat meetings can be used as the counterfactual. Also, the impact of the deliberative process can be also assessed by measuring the anticipated outcome variables before and after the participation.

- Given the statistical constraints faced in measuring the constructs such as level of information and rule of law; alternatively, Item Response Theory (IRT) approach can be tried for their measurement.
- To have a more comprehensive assessment of access to water and sanitation services; a household survey can be done to measure the quantity, quality and equity in access to these services.

2. Poor participation in Grama Sabha meetings prompts two questions. First, is better participation associated with better provision? Second, why people participate where they participated and the converse of it. This research focussed mainly on the first question. For a complete understanding of what incentivises participation, it will be useful to examine the second question in greater detail too.

3. To operationalise the research question on the association of deliberative participation with the provision of local public health goods and to derive hypotheses to answer the question; alternative theoretical frameworks such as n-person iterative game theory, canonical principal-agent theory and Sen's capability approach can be gainfully employed.

4. As a step towards further validating the results of this research, it will be useful to apply the framework used by this research to one particular programme aimed at delivering a specific public health good.

5. To understand the effectiveness of the deliberative institutions in translating citizens' preferences for local public health goods to actual provision of these goods; it will be useful to study the consistency in preference for public health good as expressed by citizens, as identified in Grama Sabha and Samanya Sabha and the actual provision of the goods, as a throughput.

5. Further studies are needed to better understand: The role of Samanya Sabha in the provision of local public health goods; reasons for lower levels of services in less developed regions and poor targeting of local public health goods to disadvantaged social groups; why participation may not promote equity in allocation of local public services; and the role of local associations and local political leadership in improving access to these services.

11.6 CONCLUDING REMARKS

In the context of rural India, where the collective need for basic water and sanitation services is high, provision of it by the Panchayats is less than adequate and citizen participation in Grama Sabha meetings is poor; this research sought to empirically investigate whether better participation could be associated with better provision of these services.

The results suggest Panchayats where Grama Sabha meetings were convened more frequently, attended by a higher number of people with better representation, discussions happen in a reciprocal, pro-social and accountable manner and decisions taken have a common good orientation; were associated with better provision of water and sanitation services.

When individuals increasingly participate in such meetings, they can be associated with better capability to collectively engage in identifying their common public service needs and frame it as a collective demand, through policy objective, for provision by the Panchayats.

At the Panchayat level, such deliberative participation can go hand in hand with enhanced credibility, responsiveness and accountability of bureaucratic action in achieving administrative commitment to legislative goals; leading to the faithful rule-bound conversion of policy objectives into actual local public health good outputs.

More simply, better deliberative participation can be associated with better capability of the individuals to engage in collective action; which on one hand, can strengthen their

collective demand for local public health goods, and on the other, can improve the responsiveness of the Panchayat in the supply of these goods.

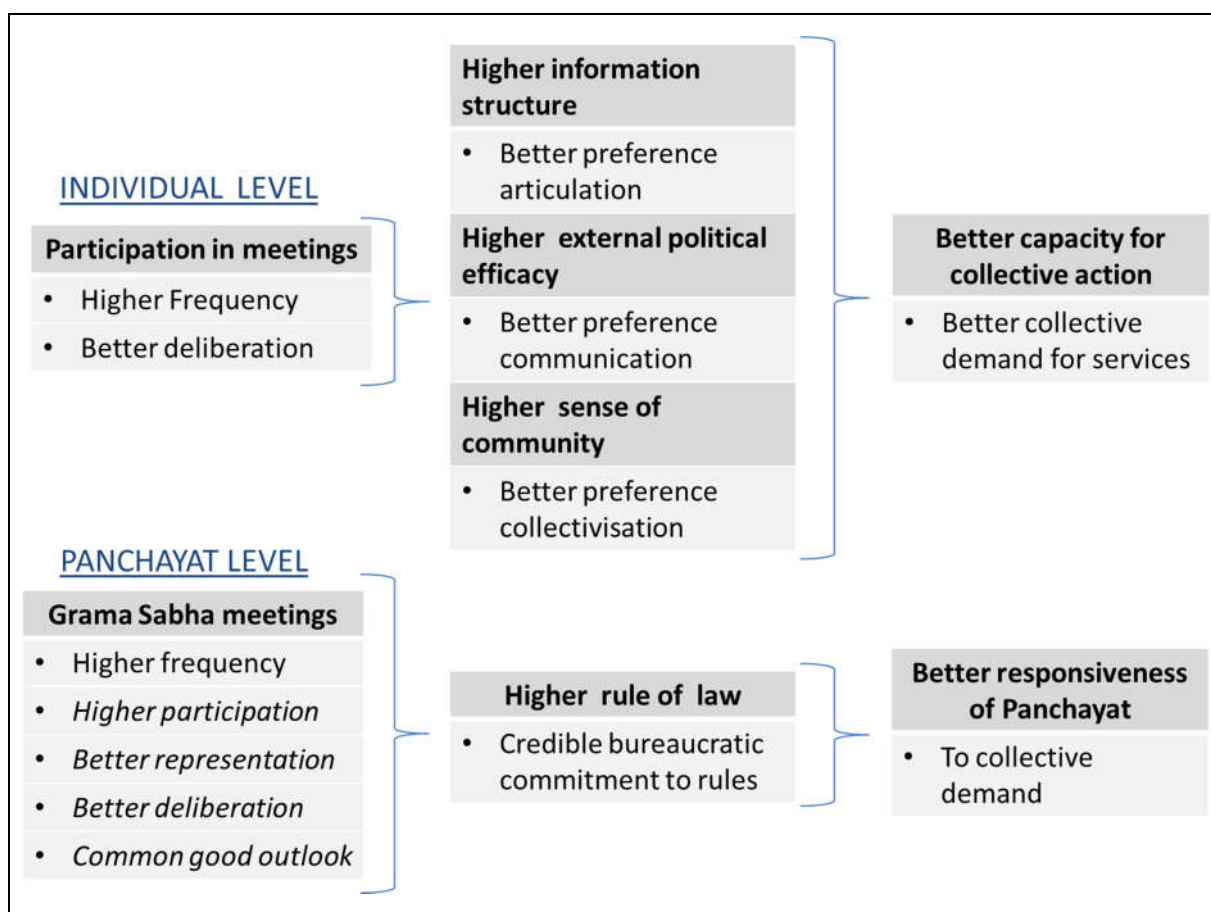
Also, such deliberative settings by being associated with effective expression of one's needs, and even discussion on each other's needs, with a common purpose to identify those needs which are in the greater interest of the community, can incentivise citizens to participate.

The findings of this research have added to the growing knowledge base that, public deliberation by incentivising solidary pro-social reciprocal motives through recognition, and dis-incentivising self-seeking material motives through social sanctions, can improve tractability of the collective action. By this, the research hopes to have furthered the understanding of the role institutions of public deliberation in improving access to local public health goods in the context of Local Governments. It also hopes to have further validated one of the central tenets of the deliberative theories that; through its associative socio-psychological benefits, the participation can improve the capability of the individuals to engage collectively.

In deliberation, citizens govern themselves and give themselves rules for common life.

James Bohman

Figure 11.1: Schematic representation of pathways explaining association of participation in Panchayat meetings with provision of basic water and sanitation services



REFERENCES

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- Ackerman, J., 2004. Co-governance for accountability: Beyond “exit” and “voice.” *World Development*, 32(3), pp.447–463.
- Acock, A., Clarke, H.D. & Stewart, M.C., 1985. A new model for old measures: A covariance structure analysis of political efficacy. *The Journal of Politics*, 47(04), pp.1062–84.
- Acock, A.A. & Clarke, H.D., 1990. Alternative measures of political efficacy: Models and means. *Quality and Quantity*, 24(1), pp.87–105.
- Agrawal, A. & Gibson, C.C. eds., 2001. *Communities and the environment : Ethnicity, gender, and the state in community based conservation*, New Brunswick: Rutgers University Press.
- Akerlof, G. & Dickens, W.T., 1982. The economic consequence of cognitive dissonance. *The American Economic Review*, 72(3), pp.307–319.
- Alchian, A.A., 2015. Property rights. In *The new palgrave dictionary of economics*. Palgrave Macmillan, pp. 696–700.
- Alchian, A.A. & Demsetz, H., 1972. Production, information costs and economic organization. *The American Economic Review*, 62(5), pp.777–795.
- Alesina, A., Baqir, R. & Easterly, W., 1999. Public good and ethnic divisions. *The Quarterly Journal of Economics*, 114(4), pp.1243–84.
- Alesina, A. & La Ferrara, E., 2000. Participation in heterogeneous communities. *Quarterly Journal of Economics*, 115(3), pp.847–904.
- Allison, P.D., 2002. *Missing data*, London: Sage Publications.
- Almond, G. & Verba, S., 1965. *The civic culture : Political attitudes and democracy in five nations*, Boston: Little Brown.
- Almond, G.A. & Coleman, J.S., 1960. *The politics of the developing areas*, Princeton, N.J.: Princeton University Press.
- Alok, V., 2011. *Role of panchayat bodies in rural development since 1959*, Indian Institute of Public Administration, New Delhi.
- Alsop, R., Krishna, A. & Sjobolm, D., 2001. *Inclusion and local elected governments: The Panchayat Raj system in India*, Washington, DC.
- AMCR, 1978. *Ashok Mehta committee report on Panchayati Raj Institutions*, Department of Rural Development, Ministry of Agriculture, Government of India, New Delhi.
- Anderson, J., 1975. *Public policy making*, New York: Praeger.
- Atal, Y., 1969. Citizen’s sense of political efficacy. *Economic and Political Weekly*, 4(1), pp.171–178.

- Austen-Smith, D., 1990. Information transmission in debate. *American Journal of Political Science*, 34(1), pp.124–152.
- Austen-Smith, D., 1992. Strategic models of talk in political decision making. *International Political Science Review*, 13(1), pp.45–58.
- Avritzer, L., 2000. Public deliberation at the local level: participatory budgeting in Brazil. In *Experiments for Deliberative Democracy Conference*. Wisconsin, USA.
- Ayers, W.S., 2003. *Supporting decentralization: The role and experience of the World Bank*, World Bank, Washington, D.C.
- Aziz, A., 2007. Decentralisation experience in Karnataka. In S. Singh & P. K. Sharma, eds. *Decentralisation: Institutions and politics in rural India*. New Delhi: Oxford University Press.
- Bachrach, K.M. & Zautra, A.J., 1985. Coping with a community stressor: the threat of a hazardous waste facility. *Journal of Health and Social Behaviour*, 26(2), pp.127–141.
- Bachtiger, A. et al., 2009. Measuring deliberation 2.0: Standards, discourse types, and sequentialization. In *Paper presented at ECPR General Conference*. Postdam, p. Vol 10.
- Bailey, F., 1963. Closed Social Stratification in India. *European Journal of Sociology*, 4, pp.107–124.
- Baland, J.-M. & Platteau, J.-P., 2000. *Halting degradation of natural resources : Is there a role for rural communities?*, Oxford: Oxford University Press.
- Balch, G.I., 1974. Multiple indicators in survey research: The concept “sense of political efficacy.” *Political Methodology*, 1, pp.1–43.
- Balla, S.J., 1998. Administrative procedures and political control of the bureaucracy. *The American Political Science Review*, 92(3), pp.663–673.
- Ban, R., Gupta, M. Das & Rao, V., 2008. The political economy of village sanitation in south India capture or poor information ? *Journal of Development Studies*, 46(4), pp.685–700.
- Ban, R., Jha, S. & Rao, V., 2012. Who has voice in a deliberative democracy? Evidence from transcripts of village parliaments in south India. *Journal of Development Economics*, 99(2), pp.428–438.
- Bandiera, O., Barankay, I. & Rasul, I., 2005. Cooperation in Collective Action. *Economics of Transition*, 13(3), pp.473–98.
- Bandura, A., 1994. Self-efficacy. *Encyclopaedia of human behaviour*, pp.71–81.
- Bandura, A., 1997. *Self-efficacy : The exercise of control*, New York: W.H. Freeman.
- Banerjee, A., Hanna, R. & Kyle, J.C., 2015. *The power of transparency: Information, identification cards and food subsidy programs in Indonesia*, National Bureau of Economic Research, Cambridge, MA.
- Banerjee, A., Hanna, R. & Mullainathan, S., 2013. Corruption. In *The handbook of organizational economics*. New Jersey: Princeton University Press.

- Banerjee, A. & Somanathan, R., 2007. The political economy of public goods: Some evidence from India. *Journal of Development Economics*, 82(2), pp.287–314.
- Barber, B., 1984. *Strong democracy: Participatory politics for a new age.*, Berkley: University of California Press.
- Bardhan, P. & Mookherjee, D., 2004. Poverty alleviation efforts of Panchayats in West Bengal. *Economic And Political Weekly*, February 2, pp.965–974.
- Bardhan, P.K. & Mookherjee, D., 2001. *Corruption and decentralization of infrastructure delivery in developing countries*, Boston: Department of Economics, Boston University.
- Bardhan, P.K. & Mookherjee, D., 2006. The rise of local governments. In P. K. Bardhan & D. Mookherjee, eds. *Decentralization and local governance in developing countries : A comparative perspective*. Cambridge, MA: MIT Press.
- Bardhan, P.K., Mookherjee, D. & Parra Torrado, M., 2010. Impact of political reservations in West Bengal local governments on anti-poverty targeting. *Journal of Globalization and Development*, 1(1), pp.1–35.
- Barron, P., Diprose, R. & Woolcock, M., 2011. *Contesting development : Participatory projects and local conflict dynamics in Indonesia*, New Haven: Yale University Press.
- Barry, B., 1995. *Justice as impartiality a treatise on social justice, volume II*, Oxford, UK: Clarendon Press.
- Barry, B., 1974. Review Article: “Exit, Voice, and Loyalty.” *British Journal of Political Science*, 4, p.79.
- Bartholomew, D., Knott, M. & Moustaki, I., 2011. *Latent variable models and factor analysis: a unified approach* 3rd Edition., Sussex: John Wiley & Sons, Inc.
- Beaman, L. et al., 2008. Powerful Women : Does Exposure Reduce Bias ? *Quarterly Journal of Economics*, 124(4), pp.1497–1540.
- Beaumont, E., 2011. Promoting political agency, addressing political inequality: A multilevel model of internal political efficacy. *The Journal of Politics*, 73(01), pp.216–231.
- Behn, R.D., 2001. *Rethinking democratic accountability*, Washington, DC: Brookings Institution Press.
- Besley, T. & Burgess, R., 2002. The political economy of government responsiveness: Theory and evidence from India. *The Quarterly Journal of Economics*, 117(4), pp.1415–1451.
- Besley, T., Pande, R. & Rao, V., 2005. *The political economy of Gram Panchayats in South India*, World Bank, Washington, DC.
- Besley, T., Rao, V. & Pande, R., 2012. Just rewards ? Local politics and public resource allocation in south India. *The World Bank Economic Review*, 26(2), pp.191–216.
- Besley, T. & Stephen Coate, 2003. Centralized versus decentralized provision of local public goods: A political economy analysis. *Journal of Public Economics*, 87(12 Dec), pp.2611–37.

- Béteille, A., 2012. *Caste, class and power: Changing patterns of stratification in a Tanjore village*, New Delhi: Oxford University Press.
- Bingham, T., 2011. *The rule of law*, London: Penguin.
- Birchler, U.W. & Butler, M., 2007. *Information economics*, New York: Routledge.
- Black, L.W. et al., 2011. Methods for analysing and measuring group deliberation. In E. P. Bucy & L. R. Holbert, eds. *Sourcebook for political communication research: methods, measures, and analytical Techniques*. Hoboken: Taylor and Francis.
- Blair, H., 2000. Participation and accountability at the periphery: Democratic local governance in six countries. *World Development*, 28(1), pp.21–39.
- BMCR, 1957. *Balvantray Mehta committee report of the team for the study of community projects and national extension service*, Government of India, New Delhi.
- Bohman, J., 1996. *Public Deliberation: pluralism, complexity and democracy*, Cambridge, MA: MIT Press.
- Bollen, K. & Lennox, R., 1991. Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin*, 110, pp.305–314.
- Bolton, P. & Dewatripont., M., 2005. *Contract theory*, Cambridge, MA: MIT Press.
- Bornstein, G., 1992. The free-rider problem in intergroup conflicts over step-level and continuous public goods. *Journal of Personality and Social Psychology*, 62(4), pp.597–606.
- Bouas, K.S. & Komorita, S.S., 1996. Group discussion and cooperation in social dilemmas. *Personality and Social Psychology Bulletin*, 22(11), pp.1144–1150.
- Bowler, S. & Donovan, T., 2002. Democracy, institutions and attitudes about citizen influence on government. *British Journal of Political Science*, 32(02), pp.371–390.
- Brancati, D., 2006. Decentralization: fuelling the fire or dampening the flames of ethnic conflict and secessionism? *International Organization*, 60(3), pp.651–685.
- Brodsky, A., 1996. Resilient single mothers in risky neighbourhoods: Negative psychological sense of community. *Journal of Community Psychology*, 24(4), pp.347–363.
- Bryld, E., 2001. Increasing participation in democratic institutions through decentralization: Empowering women and Scheduled Castes and Tribes through Panchayat Raj in rural India. *Democratization*, 8(3), pp.149–172.
- Buchan, N.R., Croson, R.T. & Dawes, R.M., 2002. Swift neighbours and persistent strangers: A cross cultural investigation of trust and reciprocity in social exchange. *American Journal of Sociology*, 108(1), pp.168–206.
- Buckner, J.C., 1988. The development of an instrument to measure neighbourhood cohesion. *American Journal of Community Psychology*, 16(6), pp.771–791.

- Burkhalter, S., Gastil, J. & Kelshaw, T., 2002. A Conceptual definition and theoretical model of public deliberation in small face to face groups. *Communication Theory*, 12(4), pp.398–422.
- CAA, 1992. *The Constitutional Amendment Act*, Government of India. Available at: <http://indiacode.nic.in/coiweb/amend/amend73.htm>.
- Calhoun, C., 1992. Introduction: Habermas and public sphere. In C. Calhoun, ed. *Habermas and the public sphere*. Cambridge, MA: MIT Press.
- Campbell, A., Gurin, G. & Miller, W., 1954. *The voter decides*, Evanston IL: Peterson Row.
- Campbell, D.E., 2006. *Why we vote : How schools and communities shape our civic life*, Princeton, N.J.: Princeton University Press.
- Campbell, T., 2003. *The quiet revolution : Decentralization and the rise of political participation in Latin American cities*, Pittsburgh, PA: University of Pittsburgh Press.
- Caprara, G.V. et al., 2009. Perceived political self-efficacy: Theory, assessment, and applications. *European Journal of Social Psychology*, 39(6), pp.1002–1020.
- Carpini, M.X.D., Cook, F.L. & Jacobs, L.R., 2004. Public deliberation, discursive participation and citizen engagement: A review of the empirical literature. *Annual Review of Political Science*, 7(1), pp.315–344.
- Chamberlain, A., 2012. A Time-Series Analysis of External Efficacy. *Public Opinion Quarterly*, 76(1), pp.117–130. Available at: <http://poq.oxfordjournals.org/cgi/doi/10.1093/poq/nfr064> [Accessed November 4, 2012].
- Chambers, S., 2003. Deliberative democratic theory. *Annual Review of Political Science*, 6, pp.307–26.
- Chattopadhyay, R. & Duflo, E., 2004. Women as policy makers: Evidence from a India-wide randomized policy experiment. *NBER Working Paper*, 72(5), pp.1409–1444.
- Chattopadhyay, R., Duflo, E. & Fischer, G., 2006. Efficiency and Rent-seeking in Local Governments. *Mimeo, MIT*.
- Chaudhuri, S., 2006. The 1994 Panchayati Raj Act and the attempt to revitalize rural local government in India: what difference does a constitutional amendment make? In *Decentralization and local governance in developing countries : A comparative perspective*. Cambridge, MA: MIT Press.
- Chavis, D. et al., 1986. Sense of community through Brunswick's lens: A first look. *Journal of Community Psychology*, 14, pp.24–40.
- Chavis, D., Lee, K. & Accosta, J., 2008. The Sense of Community (SCI) revised: The reliability and validity of the SCI-2. In *2nd International Community Psychology Conference*,. Lisboa, Portugal.
- Chavis, D. & Wandersman, A., 1990. Sense of community in the urban environment: A catalyst for participation and community development. *American Journal of Community Psychology*, 18(1), pp.55–81.

- Chavis, D.M. & Pretty, G.M.H., 1999. Sense of community: Advances in measurement and application. *Journal of Community Psychology*, 27(6), pp.635–642.
- Cheema, S.G. & Rondinelli, D.A., 2007. *Decentralizing governance : Emerging concepts and practices*, Washington, D.C: Brookings Institution Press.
- Cheung, S., 1974. A theory of price control. *Journal of Law and Economics*, (12), pp.23–45.
- Chhibber, P., 2002. Why are Some Women Politically Active? The Household, Public Space, and Political Participation in India. *International Journal of Comparative Sociology*, 43(3-5), pp.409–429. Available at: <http://cos.sagepub.com/cgi/doi/10.1177/002071520204300310> [Accessed January 10, 2012].
- Chhibber, P., Shastri, S. & Sisson, R., 2004. Federal Arrangements and the Provision of Public Goods in India. *Asian Survey*, 44(3), pp.339–352. Available at: <http://www.jstor.org/stable/4128589> [Accessed January 10, 2012].
- Chipuer, H.M. & Pretty, G.M.H., 1999. A review of the sense of community index: Current uses, factor structure, reliability, and further development. *Journal of Community Psychology*, 27(6), pp.643–658.
- Coase, R.H., 1974. The choice of the institutional framework: A comment. *Journal of Law and Economics*, (17), pp.493–496.
- Coffe, H. & Geys, B., 2005. Institutional performance and social capital: an application to the local government level. *Journal of Urban Affairs*, 27(5), pp.485–501.
- Cohen, J., 1997. Deliberation and democratic legitimacy. In J. Bohman & W. Rehg, eds. *Deliberative democracy : Essays on reason and politics*. Cambridge, MA: MIT Press.
- Coleman, J., 1990. *Foundations of social theory*, Cambridge, MA: Harvard University Press.
- Coleman, J.S., 1988. Free riders and zealots: The role of social networks. *Sociological Theory*, 6(1), pp.52–57.
- Coleman, J.S., 1986. Social Theory, Social Research, and a Theory of Action. *The American Journal of Sociology*, 91(6), pp.1309–1335.
- Coleman, J.S. & Davis, C.L., 1976. The structural context of politics and dimensions of regime performance: their importance for the comparative study of political efficacy. *Comparative Political Studies*, 9, pp.189–206.
- Colomer, 2011. *The science of politics : an introduction*, New York: Oxford University Press.
- Converse, P.E., 1972. Change in the American electorate. In A. Campbell & P. Campbell, eds. *The human meaning of social change*. New York: Russell Sage.
- Cornes, R. & Sandler, T., 1996. *The theory of externalities, public goods and club goods* Second Edi., Cambridge: Cambridge University Press.
- Couldry, N., 2010. *Why voice matters : culture and politics after neoliberalism*, London: Sage Publications.

- Craig, S.C. & Maggiotto, M., 1982. Measuring political efficacy. *Political Methodology*, 8(3), pp.85–109.
- Craig, S.C., Niemi, R. & Silver, G., 1990. Political efficacy and trust: A report on the NES pilot study items. *Political Behaviour*, 12(3), pp.289–314.
- Creswell, J., 2014. *Research design: Qualitative, quantitative, and mixed methods approaches*, London, UK: Sage Publications.
- Crook, R.C. & Manor, J., 1998. *Democracy and decentralisation in South Asia and West Africa : Participation, accountability and performance*, Cambridge, MA: Cambridge University Press.
- Cusack, T.R., 1997. *Social capital, institutional structures, and democratic performance: A comparative study of German local governments*, WZB Berlin Social Science Centre, Berlin.
- Dahl, R.A., 2006. *On political equality*, New Haven: Yale University Press.
- Dahlman, C.J., 1979. The Problem of externality. *Journal of Law and Economics*, 22(1), pp.141–162.
- Davidson, W. & Cotter, P., 1986. Measurement of sense of community within the sphere of city. *Journal of Applied Social Psychology*, 16(7), pp.608–619.
- Day, P. & Klein, R., 1987. *Accountabilities : five public services*, London, UK: Tavistock.
- DCR, 1963. *Diwakar committee report of study team on position of grama sabha in Panchayati Raj Movement*, Government of India, New Delhi.
- DeMello, L., 2004. Can fiscal decentralization strengthen social capital? *Public Finance Review*, 32, pp.04–35.
- Deshpande, A., 2000. Does caste still define disparity? A look at inequality in Kerala, India. *American Economic Review*, 90(2), pp.322–325.
- DeSouza, P.R., 2005. Decentralisation and local government: The “Second Wind” of democracy in India. In Z. Hasan, E. Sridharan, & R. Sudarshan, eds. *India’s living constitution: Ideas, practices, controversies, practices, controversies*. London: Anthem Press.
- DeSouza, P.R., 2000. *Multi state study of Panchayati Raj legislation and administrative reform: Background paper 1*, World Bank, Washington, D.C.
- Diamantopoulos, A., Riefler, P. & Roth, K.P., 2008. Advancing formative measurement models. *Journal of Business Research*, 61, pp.1203–1218.
- Diamantopoulos, A. & Winklhofer, H.M., 2001. Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), pp.269–277.
- Dixit, A.K., 1996. *The making of economic policy: A transaction-cost politics perspective*, Cambridge, MA: MIT Press.
- Doolittle, R. & MacDonald, D., 1978. Communication and a sense of community in a metropolitan neighbourhood: a factor analytic examination. *Communication Quarterly*, 26(3), pp.2–7.

- Dowding, K. et al., 2000. Exit, voice and loyalty: Analytic and empirical developments. *European Journal of Political Research*, 37, pp.469–495.
- Dreze, J. & Sen, A., 1989. *Hunger and public action*, Oxford, UK: Oxford University Press.
- Dryzek, J.S., 2010. *Foundations and frontiers of deliberative governance*, Oxford: Oxford University Press.
- Dryzek, J.S., 2007. Theory, evidence, and the tasks of deliberation. In S. W. Rosenberg., ed. *Deliberation, participation and democracy: Can the people govern?*. Basingstoke: Palgrave Macmillan.
- Dunleavy, P., 1991. *Democracy, bureaucracy, and public choice : Economic explanations in political science*, Harlow: Prentice Hall.
- Easton, D. & Dennis, J., 1967. The child's acquisition of regime norms: Political efficacy. *The American Political Science Review*, 61(1), pp.25–38.
- Edwards, J.R., 2011. The fallacy of formative measurement. *Organizational Research Methods*, 14(2), pp.37–388.
- Edwards, J.R. & Bogozzi, R.P., 2000. On the nature and direction of relationships between constructs and measures. *Psychological Methods*, 5(2), pp.155–174.
- Eggertsson, T., 1990. *Economic behaviour and institutions*, Cambridge, MA: Cambridge University Press.
- Elster, J., 1998. *Deliberative democracy*, Cambridge: Cambridge University Press.
- Evans, P. & Rauch, J., 1999. Bureaucracy and growth: A cross-national analysis of the effects of "Weberian" state structures on economic growth. *American Sociological Review*, 64(5), pp.748–765.
- Faguet, J.-P., 2013. Can sub-national autonomy strengthen democracy in Bolivia? *LSE Research Online*.
- Faguet, J.-P., 2008. Decentralisation's effects on public investment: evidence and policy lessons from Bolivia and Colombia. *Journal of Development Studies*, 44(8), pp.1100–1121.
- Faguet, J.-P., 2005. *Governance from below: a theory of local government with two empirical tests*, STICERD, London School of Economics and Political Science, London.
- Faguet, J.-P. & Pöschl, C., 2014. *Is decentralization good for development? Perspectives from academics and policy makers*, Oxford, UK: Oxford University Press.
- Faguet, J.P. & Sánchez, F., 2008. Decentralization's effects on educational outcomes in Bolivia and Colombia. *World Development*, 36, pp.1294–1316.
- Farrell, J. & Robin, M., 1996. Cheap talk. *Journal of Economic Perspectives*, 10(3), pp.103–118.
- Fearon, J.D., 1998. Deliberation as discussion. In J. Elster, ed. *Deliberative democracy*. Cambridge: Cambridge University Press.

- Fearon, J.D. & Laitin, D.D., 1996. Explaining interethnic cooperation. *The American Political Science Review*, 90(4), pp.715–735.
- Fehr, E. & Gächter, S., 2000. Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives*, 14(3), pp.159–182.
- Field, A., 2013. *Discovering statistics using IBM SPSS statistics* 4th Edition. London: Sage Publications.
- Finkel, S.E., 1985. Reciprocal effects of participation and political efficacy: A panel analysis. *American Journal of Political Science*, 29(4), pp.891–913.
- Finkel, S.E., 1987. The effects of participation on political efficacy and political support: Evidence from a West German panel. *The Journal of Politics*, 49(02), pp.441–464.
- Finkel, S.E., Muller, E.N. & Opp, K.-D., 1989. Personal influence, collective rationality, and mass political action. *The American Political Science Review*, 83(3), pp.885–904.
- Fisher, A.T., Sonn, C. & Bishop, B.J., 2002. *Psychological sense of community: research, application and implications*, New York: Springer Science + Business Media.
- Fishkin, J., 1995. *The voice of the people*, New Haven: Yale University Press.
- Fishkin, J., 2009. *When the people speak : Deliberative democracy and public consultation*, Oxford: Oxford University Press.
- Fishkin, J. & Luskin, R., 1999. Bringing deliberation to the democratic dialogue. In M. McCombs & A. Reynolds, eds. *The Poll with a human face: The national issue convention experiment in political communication*. Mahwah, NJ: Lawrence Erlbaum.
- Fishkin, J.S. & Luskin, R.C., 2005. Experimenting with a democratic ideal: Deliberative polling and public opinion. *Acta Politica*, 40(3), pp.284–298.
- Florin, P. & Wandersman, A., 1984. Cognitive social learning and participation in community development. *American Journal of Community Psychology*, 12(6), pp.689–708.
- Fox, J., 1991. *Regression diagnostics*, London: Sage Publications.
- Fraser, N., 1990. Rethinking the public sphere: A contribution to the critique of actually existing democracy. *Social Text*, 25(25/26), p.56.
- Fujiwara, T. & Wantchekon, L., 2013. Can informed public deliberation overcome clientilism? Experimental evidence from Benin. *American Economic Journal: Applied Economics*, 5(4), pp.241–255.
- Fung, A., 2003. *Deepening democracy: institutional innovations in empowered participatory governance*, London: Verso.
- Fung, A., 2001. *Deliberative democracy*, California: Thousand Oaks.
- Fung, A., 2007. Democratic theory and political science: A pragmatic method of constructive engagement. *American Political Science Review*, 2007(3), pp.443–458.

- Fung, A., 2006. Varieties of Participation in Complex Governance. *Public Administration Review*, 66(s1), pp.66–75. Available at: <http://www.jstor.org/pss/2083198> [Accessed December 22, 2011].
- Gambetta, D., 1998. “Claro!”: An essay on discursive machismo. In J. Elster, ed. *Deliberative Democracy*. Cambridge: Cambridge University Press.
- Ganz, J.S., 1971. *Rules: A systematic study*, Paris: Mouton.
- Gastil, J., 2000. *By popular demand : Revitalizing representative democracy through deliberative elections*, Berkley: University of California Press.
- Gastil, J. et al., 2002. Civic awakening in the jury room: a test of the connection between jury deliberation and political participation. *The Journal of Politics*, 64(2), pp.585–595.
- Gastil, J., Black, L.W., et al., 2008. From group member to democratic citizen: How deliberating with fellow jurors reshapes civic attitudes. *Human Communication Research*, 34(1), pp.137–169.
- Gastil, J., 2000. Is face-to-face citizen deliberation a luxury or a necessity? *Political Communication*, 17(4), pp.357–361.
- Gastil, J., 2008. *Political communication and deliberation*, London: Sage Publications.
- Gastil, J., Black, L. & Moscovitz, K., 2008. Ideology, attitude change, and deliberation in small face-to-face groups. *Political Communication*, 25(1), pp.23–46.
- Gastil, J. & Dillard, J.P., 1999. The aims, methods, and effects of deliberative civic education through the national issues forums. *Communication Education*, 48(3), pp.179–192.
- Gerring, J., 2012. *Social science methodology : A unified framework* 2nd Edition., Cambridge: Cambridge University Press.
- Ghatak, M. & Ghatak, M., 2002. Recent reforms in the Panchayat system in West Bengal: Toward greater participatory governance? *Economic And Political Weekly*, 37(1), pp.45–58.
- Gilbert, M., 1989. *On social facts*, London: Routledge.
- Glass, J., Bengtson, V.L. & Dunham, C.C., 1986. Attitude similarity in three-generation families: socialization, status inheritance, or reciprocal influence? *American Sociological Review*, 51(5), pp.685–698.
- Glynn, T.J., 1981. Psychological sense of community: Measurement and application. *Human Relations*, 34(9), pp.789–818.
- Goetz, A.M., 2007. Political cleaners: Women as the new anti-corruption force? *Development and Change*, 38(1), pp.87–105.
- Goetz, A.M. & Jenkins, R., 2001. Hybrid forms Of accountability: Citizen engagement in institutions of public-sector oversight in India. *Public Management Review*, 3(3), pp.363–383.
- GOI, 1999. *Guidelines for implementation of rural water supply programme*, Government of India, New Delhi.

- GOI, 2000. *Guidelines for implementation of rural water supply programme: revised 2nd edition*, Government of India, New Delhi.
- GOK, 1993. *The Karnataka Panchayat Raj Act*, Government of Karnataka.
- Greene, W.H., 2012. *Econometric analysis*, Harlow: Pearson.
- Grimes, M., 2008. The civic benefits of imperfect deliberation. *Journal of Public Deliberation*., 4(1).
- Grindle, M.S., 2007. *Going local: Decentralization, democratization and the promise of good governance*, Princeton, N.J.: Oxford University Press.
- Grooves, R.M. et al., *Survey methodology* 2nd Edition., New Jersey: John Wiley & Sons, Inc.
- Gusfield, J.R., 1975. *The community: A critical response*, New York: Harper Colophon.
- Gutmann, A. & Thompson, D., 1996. *Democracy and disagreement*, Cambridge, MA: Belknap Press of Harvard.
- Gutmann, A. & Thompson, D., 2004. *Why deliberative democracy*, Princeton, NJ: Princeton University Press.
- Guttman, N., 2007. Bringing the mountain to the public: Dilemmas and contradictions in the procedures of public deliberation initiatives that aim to get “ordinary citizens” to deliberate policy issues. *Communication Theory*, 17(4), pp.411–438.
- GVKRCR, 1985. *GVK Rao committee report of the committee on administrative arrangements for rural development and poverty alleviation programmes*, Planning Commission, Government of India, New Delhi.
- Habermas, J., 1996. *Between facts and norms: Contributions to a discourse theory of law and democracy*, Cambridge, MA: MIT Press.
- Habermas, J., 1989. *The structural transformation of the public sphere: An inquiry into a category of bourgeois society*, Cambridge, MA: MIT Press.
- Hardin, G., 1968. The tragedy of the commons. The population problem has no technical solution; it requires a fundamental extension in morality. *Science*, 162, pp.1243–1248.
- Hardin, R., 1982. *Collective action*, Baltimore, Maryland: Johns Hopkins University Press.
- Hart, O., 2008. Incomplete contracts. *The new palgrave dictionary of economics*.
- Heap, S.H. et al., 1992. *The theory of choice: A critical guide* First, Oxford, UK: Blackwell Publishing.
- Heller, P., Harilal, K. & Chaudhuri, S., 2007. Building local democracy: Evaluating the impact of decentralization in Kerala, India. *World Development*, 35(4), pp.626–648.
- Hertel, B.R., 1976. Minimizing error variance introduced by missing data routines in survey analysis. *Sociological Methods & Research*, 4(4), pp.459–474.

- Hill, J.L., 1996. Psychological sense of community: Suggestions for future research. *Journal of Community Psychology*, 24(4), pp.431–438. Available at: [http://dx.doi.org/10.1002/\(SICI\)1520-6629\(199610\)24:4<431::AID-JCOP10>3.0.CO](http://dx.doi.org/10.1002/(SICI)1520-6629(199610)24:4<431::AID-JCOP10>3.0.CO).
- Hirschman, A.O., 1970. *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*, Cambridge, MA: Harvard University Press.
- Hirschman, A.O., 1978. Exit, voice, and the state. *World Politics*, 31(1), pp.90–107.
- Hirshleifer, J. & Riley, J.G., 1992. *The analytics of uncertainty and information*, Cambridge: Cambridge University Press.
- Hoff, K., Kshetramade, M. & Fehr, E., 2011. Caste and punishment: the legacy of caste culture in norm enforcement*. *The Economic Journal*, 121(556), pp.F449–F475.
- Hogarth, R.M., Reder, M.W. & (eds), 1987. *The rational choice: The contrast between economics and psychology*, Chicago: University of Chicago Press.
- Holmes, S., 1988. “Gag Rules.” In J. Elster & R. Slagstad, eds. *Constitutionalism and democracy*. Cambridge: Cambridge University Press.
- Holmstrom, B. & Milgrom, P., 1991. Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design. *Journal of Law, Economics, & Organization*, 7, pp.24–52.
- Hossain, N. & Musembi, C.N., 2010. *Corruption, accountability and gender: Understanding the connections*, UNDP and UNIFEM, New York.
- Huber, J.D. & McCarty, N., 2004. Bureaucratic capacity, delegation, and political reform. *American Political Science Review*, 98(3), pp.481–494.
- Humphreys, M., Masters, W.A. & Sandbu, M.E., 2006. The role of leaders in democratic deliberations: Results from a field experiment in São Tomé and Príncipe. *World Politics*, 58(4), pp.583–622.
- Huntington, S.P., 1991. *The third wave: Democratization in the late twentieth century*, London: University of Oklahoma Press.
- Ikeda, K., Kobayashi, T. & Hoshimoto, M., 2008. Does political participation make a difference? The relationship between political choice, civic engagement and political efficacy. *Electoral Studies*, 27(1), pp.77–88.
- Isaac, T.T., 2005. Women elected representatives in Kerala (1995-2000): From symbolism to empowerment. In L. Jain, ed. *Decentralisation and local governance*. New Delhi: Orient Longman.
- Iyengar, S., 1980. Trust, efficacy and political reality: A longitudinal analysis of Indian high school students. *Comparative Politics*, 13(1), pp.37–51.
- Jain, S., 1997. Grama sabha: Gateway to grass root democracy. *Journal of Rural Development*, 16(4), pp.557–73.

- Jarvis, C.B., Mackenzie, S.B. & Podsakoff, P.M., 2003. A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30(2), pp.192–218.
- Jaworski, A. & Coupland, N., 1999. *The discourse reader*, New York: Routledge.
- Jayal, N., 2001. *Democracy and the state: Welfare, secularism and development in contemporary India*, New Delhi: Oxford University Press.
- Jejeebhoy, S., 2002. Convergence and divergence in spouses' perspectives on women's autonomy in rural India. *Studies in Family Planning*, 33(4), pp.299–308.
- Jenkins, M.W. & Curtis, V., 2005. Achieving the “good life”: Why some people want latrines in rural Benin. *Social Science & Medicine*, 61(11), pp.2446–2459.
- Joranko, D., 1998. The Sense of community on a racially integrated residential block in Lansing, Michigan. In “*Specific Populations.*” Michigan: Michigan Sociological Association.
- Kahneman, D. & Tversky, A., 1979. Prospect theory: An analysis of decision under risk. *Econometrica*, XLVIII, pp.263–291.
- Kaiser, H.F., 1974. An index of factorial simplicity. *Psychometrika*, 39(1), pp.31–6.
- Kapoor, P., 2014. *Empowering scheduled tribe women : A sociological study of political efficacy among Gaddi woman*, Meerut.
- Karaman, T., 2004. Political efficacy and its antecedents in contemporary Russia. *Journal of Communist Studies and Transition Politics*, 20(2), pp.30–49.
- Kennedy, P., 2008. *A guide to econometrics* 6th Edition, Oxford: Blackwell Publishers Ltd.
- Khwaja, A.I., 2004. Is increasing community participation always a good thing? *Journal of the European Economic Association*, 2(2/3), pp.427–36.
- King, G., Keohane, R. & Verba, S., 1994. *Designing social inquiry : Scientific inference in qualitative research*, New Jersey: Princeton University Press.
- Kinney, B., 2012. Deliberation's contribution to community capacity building. In T. Nabatchi et al., eds. *Democracy in motion: Evaluating the practice and impact of deliberative civic engagement*. Oxford, UK: Oxford University Press.
- Kiser, L.L. & Ostrom, E., 1982. The three worlds of action: A meta-theoretical synthesis of institutional approaches. In E. Ostrom, ed. *Strategies of political enquiry*. London: Sage Publications.
- Kish, L., 1965. *Survey sampling*, London, UK: John Wiley & Sons, Inc.
- Klaes, M., 2008. History of transaction cost. *The new palgrave dictionary of economics*.
- Kuhn, T.S., 1970. *The structure of scientific revolutions*, Chicago: University of Chicago Press.
- Lane, J.-E. & Ersson, S., 1999. *Politics and society in Western Europe*, London, UK: Thousand Oaks.

- Laslett, P., 1975. *Philosophy, politics and society : A collection*, Oxford: Basil Blackwell.
- Lassen, D.D. & Serritzlew, S., 2011. Jurisdiction size and local democracy: Evidence on internal political efficacy from large-scale municipal reform. *American Political Science Review*, 105(02), pp.238–258.
- Lasswell, H., 1936. *Politics: Who gets, what, when, how*, New York: Whittlesey House.
- Leppala, S., 2013. *Arrow's paradox and markets for non-proprietary information*, Cardiff Business School, Cardiff.
- Libecap, G.D., 1989. *Contracting for property rights*, Cambridge: Cambridge University Press.
- Lincoln, Y. & Guba, E., 1985. *Naturalistic inquiry*, London: Sage Publications.
- Lindeman, M., 2002. Opinion quality and policy preferences in deliberative research. In M. X. D. Carpin, L. Huddie, & R. Y. Shapiro, eds. *Political decision making, deliberation and participation*. Oxford: Elsevier Science Publishing Company.
- Lipsky, M., 2010. *Street-level bureaucracy : Dilemmas of the individual in public services*, New York: Russell Sage Foundation.
- Litvack, J., Ahmad, J. & Bird, R., 1998. *Rethinking decentralization in developing countries*, World Bank, Washington, D.C.
- LMSCR, 1986. *LM Singhvi committee report*, Government of India, New Delhi.
- Lowndes, V. & Wilson, D.J., 2001. Social capital and local governance: Exploring the institutional design variable. *Political Studies*.
- Macedo, S. ed., 1999. *Deliberative politics*, Oxford: Oxford University Press.
- Maddick, H., 1970. *Panchayati Raj : A study of rural local government in India*, London: Longman.
- Madsen, D.K., 1973. *The sense of political efficacy in India: An exploration in political psychology*. University of California, Los Angeles.
- Madsen, D., 1987. Political self-efficacy tested. *American Political Science Review*, 81(2), pp.571–582.
- Malik, Y., 1979. Trust, efficacy, and attitude toward democracy: a case study from India. *Comparative Education Review*, 23(3), pp.433–442.
- Manin, B., 1987. On legitimacy and political deliberation. *Political Theory*, 15(3), pp.338–368.
- Manor, J., 2011. *Perspectives on Decentralization*, Swedish International Centre for Local Democracy, Visby, Sweden.
- Manor, J., 1999. *Political economy of democratic decentralization*, World Bank, Washington, DC. Available at: <http://documents.worldbank.org/curated/en/1999/03/442341/political-economy-democratic-decentralization>.

- Mansbridge, J. et al., 2010. The place of self-interest and the role of power in deliberative democracy. *Journal of Political Philosophy*, 18(1), pp.64–100.
- Mansuri, G. & Rao, V., 2013. *Localizing development: Does participation work*, World Bank, Washington, DC.
- Maravall, J. M., & Przeworski, A. (2003). *Democracy and the rule of law*. Cambridge: Cambridge University Press.
- Marc, A. et al., 2013. *Societal dynamics and fragility: Engaging societies in responding to fragile situations*, World Bank, Washington, D.C.
- March, J.G. & Olsen, J.P., 1995. *Democratic governance*, New York: Free Press.
- March, J.G. & Olsen, J.P., 1989. *Rediscovering institutions: the organizational basis of politics*, Oxford, UK: Maxwell Macmillan.
- March, J.G. & Olsen, J.P., 2008. The Logic of appropriateness. In R. E. Goodin, M. Moron, & M. Rein, eds. *The Oxford Handbook of Public Policy*. Oxford: Oxford University Press.
- March, J.G. & Olsen, J.P., 2006. The new institutionalism: Organizational factors in political life. *American Political Science Review*, 78, pp.734–749.
- Margolis, H., 1982. *Selfishness, altruism and rationality*, Cambridge: Cambridge University Press.
- Marmot, M. (2005). Social determinants of health inequalities. *The Lancet*, 365, 1099–104.
- Martimort, D., 2008. Contract theory. *The new palgrave dictionary of economics*.
- Marwell, G. & Oliver, P., 1993. *The critical mass in collective action: A micro-social theory*, New York: Cambridge University Press.
- Mathew, G., 1994. *Panchayat Raj: From legislation to movement*, New Delhi: Concept Publishing Company.
- Mavalankar, D. & Shankar, M., 2004. Sanitation and water supply: The forgotten infrastructure. In *Indian infrastructure report 2004: Ensuring value for money*. New Delhi: Oxford University Press.
- McCubbins, M. & Schwartz, T., 1984. Congressional oversight overlooked: Police patrols versus fire alarms. *American Journal of Political Science*, 28(1), pp.165–79.
- McGinnis, M.D., 2011. An Introduction to IAD and the Language of the Ostrom Workshop: A Simple Guide to a Complex Framework. *Policy Studies Journal*, 39(1), pp.169–183. Available at: <http://doi.wiley.com/10.1111/j.1541-0072.2010.00401.x>.
- McMillan, D.W. & Chavis, D.M., 1986. Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), pp.6–23. Available at: 2-I.
- MDWS, 2012. *Guidelines: Nirmal Bharat Abhiyan*, Ministry of Drinking water and Sanitation, Government of India, New Delhi.
- MDWS, 2015. National rural drinking water programme. *Ministry of Drinking Water and Sanitation*. Available at: <http://www.mdws.gov.in/NRDWP> [Accessed June 9, 2015].

- MDWS, 2014. *Swachh Baharat Mission*, Ministry of Drinking Water and Sanitation, Government of India, New Delhi.
- Meenakshisundaram, S., 2005. Rural development for Panchayat Raj. In L. Jain, ed. *Decentralisation and local governance*. Hyderabad: Orient Longman.
- Mendelberg, T., 2002. The deliberative citizen: Theory and evidence. In M. D. Carpin, L. Huddy, & R. Shapiro, eds. *Research in micro politics: Political decision making, deliberation and participation*. Greenwich: JAI Press, pp. 151–193.
- Milbrath, L.W., 1965. *Political participation: How and why do people get involved in politics?*, Chicago: Rand McNally College Publishing Company.
- Miller, A., 1979. Type-set politics: Impact of newspapers on public confidence. *The American Political Science Review*, 73(1), pp.67–84.
- Miller, G.J., 2005. The political evolution of principal-agent models. *Annual Review of Political Science*, 8(1), pp.203–225.
- Mitnick, B.M., 1984. Agency problem and political institutions. In *Sixth Annual Research Conference of the Association for Public Policy Analysis and Management*. New Orleans.
- Moe, T.M., 2013. Delegation, control, and the study of public bureaucracy. In R. Gibbons & J. Roberts, eds. *Handbook of organizational economics*. Princeton, N.J.: Princeton University Press.
- Moe, T.M., 1990. Political institutions: The neglected side of the story. *Journal of Law, Economics, & Organization*, 6, pp.213–253.
- Moe, T.M., 1984. The New economics of organization. *American Journal of Political Science*, 28(4), pp.739–777.
- Mokken, R.J., 1971. *A theory and procedure of scale analysis: With applications in political research*, Hague: Mouton.
- Molho, I., 1997. *The economics of information: Lying and cheating in markets and organisations*, Oxford: Blackwell Publishing.
- Morrell, M.E., 2005. Deliberation, democratic decision-making and internal political efficacy. *Political Behaviour*, 27(1), pp.49–69.
- Morrell, M.E., 2003. Survey and experimental evidence for a reliable and valid measure of internal political efficacy. *The Public Opinion Quarterly*, 67(4), pp.589–602.
- Morrison, K. & Singer, M., 2007. Inequality and deliberative development: Revisiting Bolivia's experience with the PRSP. *Development Policy Reviews*, 25, pp.6721–6740.
- MRD-WSP, 2012. *A handbook for Gram Panchayats*, Ministry of Rural Development, Government of India and Water and Sanitation Programme, World Bank, New Delhi.
- MSPI, 2013. *Key indicators of drinking water, sanitation, hygiene and housing condition in India*, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

- Nabatchi, T., 2007. *Deliberative democracy: The effects of participation on political efficacy (Doctoral Dissertation)*. Indiana University.
- Nanjundappa, 2002. *High powered committee report on regional imbalances*, Government of Karnataka, Bangalore.
- Natraj, V., Premalatha, N. & Gowda, V.H., 2014. *Study of panchayat finances in Karnataka*, Institute for Development and Empowerment, Mysore.
- Nie, N.H., Powell, G.B. & Prewitt, K., 1969. Social structure and political participation: Developmental relationships. *The American Political Science Review*, 63(3), pp.808–838.
- Niemi, R., Craig, S. & Mattei, F., 1991. Measuring internal political efficacy in the 1988 National Election Study. *American Political Science Review*, 85, pp.1407–1413.
- North, D., 1990. *Institutions, institutional change and economic performance*, Cambridge: Cambridge University Press.
- Norton, A. & Haan, A. de, 2013. *Social cohesion: Theoretical debates and practical applications with respect to jobs*, World Bank, Washington, D.C.
- Norval, A.J., 2011. Moral perfectionism and democratic responsiveness: reading Cavell with Foucault. *Ethics & Global Politics*, 4(4), pp.207–229.
- Nowak, M.A. & Sigmund, K., 2005. Evolution of indirect reciprocity. *Nature*, 437(7063), pp.1291–1298.
- Nyle, W.R., 2002. Testing the empowerment thesis: The participatory budget in Belo Horizonte and Betim, Brazil. *Comparative Politics*, 34(2), pp.127–145.
- O'Reilly, K. & Louis, E., 2014. The toilet tripod: Understanding successful sanitation in rural India. *Health and Place*, 29, pp.43–51.
- Oates, W.E., 1972. *Fiscal federalism*, New York: Harcourt Brace Jovanovich.
- Oates, W.E., 2005. Toward a second-generation theory of fiscal federalism. *International Tax and Public Finance*, 12(4), pp.349–73.
- OECD, 2008. *Handbook on constructing composite indicators: Methodology and user guide*, Paris.
- Oliver, P.E., 1993. Formal Models of Collective Action. *Annual Review of Sociology*, 19(1), pp.271–300. Available at: <http://soc.annualreviews.org/cgi/doi/10.1146/annurev.soc.19.1.271>.
- Olken, B., 2010. Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia. *American Political Science Review*, 104(02), pp.243–267.
- Olson, M., 1965. *The logic of collective action: Public goods and theory of groups*, Cambridge, MA: Harvard University Press.
- Olson, M., 1969. The principle of “fiscal equivalence”: The division of responsibilities among different levels of government. *The American Economic Review*, 59(2), pp.479–487.

- Oommen, M., 2005. Rural fiscal decentralisation in India: A brief review of literature. In L. Jain, ed. *Decentralisation and local governance*. Hyderabad: Orient Longman.
- Ostrom, E., 1998. A behavioural approach to the rational choice theory of collective action. *American Political Science Review*, (92), pp.1–22.
- Ostrom, E., 2011. Background on the Institutional Analysis and Development Framework. *Policy Studies Journal*, 39(1), pp.7–27.
- Ostrom, E., 2002. Type of Good and collective action. In *Workshop in Political Theory and Policy Analysis*. Indian University.
- Ostrom, E., 2005. *Understanding institutional diversity*, Princeton, NJ: Princeton University Press.
- Ostrom, E. & Hess, C., 2007. Private and Common Property Rights. *SSRN Electronic Journal*. Available at: Available at SSRN: <http://ssrn.com/abstract=1304699>.
- Ostrom, E. & Walker, J., 2003. *Trust and reciprocity : Interdisciplinary lessons from experimental research*, New York: Russell Sage Foundation.
- Ostrom, V., 1996. Faustian bargains. *Constitutional Political Economy*, 7(4), pp.303–308.
- Page, B., 1996. *Who Deliberates? Mass media in modern democracy*, Chicago: Chicago University Press.
- Pateman, C., 1970. *Participation and Democratic Theory*, Cambridge, MA: Cambridge University Press.
- Perkins, Brown & Taylor, 1996. The ecology of empowerment: predicting participation in community organizations. *Journal of Social Issues*, 52, pp.85–110.
- Perkins, D. et al., 1990. Participation and the social and physical environment of residential blocks: Crime and community context. *American Journal of Community Psychology*, 18, pp.83–115.
- Perkins, D.D. & Long, D.A., 2002. Neighbourhood sense of community and social capital: A multi-level analysis. In A. T. Fisher, C. C. Sonn, & B. Bishop, eds. *Psychological sense of community: Research, applications, and implications*. New York: Springer Science + Business Media.
- Persson, T. & Tabellini, E.G., 2000. *Political Economics: Explaining Economic Policy*, Cambridge, MA: MIT Press.
- Peters, G.B., 2001. *The politics of bureaucracy*, London: Routledge.
- Phlips, L., 1988. *The economics of imperfect information*, Cambridge: Cambridge University Press.
- Planning Commission, 2010. *Evaluation study on Rajiv Gandhi national drinking water mission*, New Delhi.
- Planning Commission, 2001. *Report of the task force on Panchayati Raj Institutions (PRIs)*, New Delhi.
- Planning Commission, 2006. *Report of the working group on democratic decentralisation & PRIs*, New Delhi.

- Pollitt, C., 2009. Decentralization: a central concept in public management. In *The Oxford Handbook of Public Management*. Oxford, UK: Oxford University Press.
- Poteete, A.R. & Ostrom, E., 2004. Heterogeneity, group size and collective action: The role of institutions in forest management. *Development and Change*, 35, pp.435–461.
- Prud'homme, R., 1995. The dangers of decentralization. *The World Bank Research Observer*, 10(2), pp.201–20.
- Przeworski, A., 1998. Deliberation and ideological domination. In J. Elster, ed. *Deliberative democracy*. Cambridge: Cambridge University Press.
- Putnam, R.D., 1993. *Making democracy work : civic traditions in modern Italy*, Princeton, N.J.: Princeton University Press.
- Quiggin, J., 1993. Common property, equality, and development. *World Development*, 21, pp.1123–1138.
- Raabe, K., Madhushree, S. & Birner, R., 2009. *The effects of political reservations for women on local governance and rural service provision survey evidence from Karnataka*, International Food Policy Research Institute, Washington, D.C.
- Rao, H.C., 1989. Decentralised planning: An overview of experience and prospects. *Economic And Political Weekly*, 24(8).
- Rao, M.G., 2007. Rural fiscal decentralization in India: Problems and reform issues. In S. Singh & P. K. Sharma, eds. *Decentralisation: Institutions and politics in rural India*. New Delhi.
- Rao, M.G. & Nath, H.K.A., 2004. *Fiscal decentralization in Karnataka*, Washington, DC: world Bank.
- Rao, V. & Sanyal, P., 2010. Dignity through discourse: Poverty and the culture of deliberation in Indian village democracies. *The Annals of the American Academy of Political and Social Science*, 629(1), pp.146–172.
- Rawls, J., 1999. *A theory of justice*, Oxford: Oxford University Press.
- RDPR, 2015. *Annual report 2014-15*, Rural Development and Panchayat Raj Ministry, Government of Karnataka, Bangalore.
- RDPR(a), 2014. *Annual report: 2013-14*, Rural Development and Panchayat Raj Ministry, Government of Karnataka, Bangalore.
- RDPR(b), 2014. Panchatantra. *Rural Development and Panchayat Raj Ministry*. Available at: <http://www.panchatantra.kar.nic.in/stat/Default.aspx> [Accessed May 5, 2014].
- Riger, S. & Lavrakas, P., 1981. Community ties: Patterns of attachment and social interaction in urban neighbourhoods,. *American Journal of Community Psychology*, 9(1), pp.55–66.
- Riger, S., Lebailley, R. & Gordon, M., 1981. Community ties and urbanites' fear of crime: An ecological investigation. *American Journal of Community Psychology*, 9(6), pp.653–665.
- Rockman, B.A., 2011. Bureaucracy. *International Encyclopaedia of Political Science*.

- Rondinelli, D.A., Cheema, S.G. & John, N.R., 1983. *Decentralization in developing countries : A review of recent experiences*, Washington, D.C: World Bank.
- Rossiter, J., 2002. The C-OAR-SE procedure for scale development in marketing. *International Journal of Research in Marketing*, 19(4), pp.305–335.
- Rothstein, B., 1996. Political institutions: An overview. In R. E. Goodin & H.-D. Klingemann, eds. *A new handbook of political science*. Oxford: Oxford University Press.
- Roy, S., 2014. *Society and politics in India: Understanding political sociology*, New Delhi: PHI Learning.
- Ryfe, D.M., 2005. Does deliberative democracy work? *Annual Review of Political Science*, 8, pp.49–71.
- Saavedra, R., Earley, C.P. & Dyne, L. Van, 1993. Complex interdependence in task-performing groups. *Journal of Applied Psychology*, 78(1), pp.61–72.
- Sally, D., 1995. Conversation and cooperation in social dilemmas: A meta-analysis of experiments from 1958 to 1992. *Rationality and Society*, 7, pp.58–92.
- Sampson, R.J., Raudenbush, S.W. & Earls, F., 1997. Neighbourhoods and violent crime: A multilevel study of collective efficacy. *Science (New York, N.Y.)*, 277, pp.918–926.
- Samuelson, P.A., 1955. A diagrammatic exposition of a theory of public expenditure. *Review of Economics and Statistics*, (37), pp.350–6.
- Samuelson, P.A., 1954. The pure theory of public expenditure. *Review of Economics and Statistics*, 37, pp.387–9.
- Sandmo, A., 2008. Public goods. *The new palgrave dictionary of economics*.
- Sarason, S.B., 1974. *The psychological sense of community: Prospects for a community psychology*, San Francisco: Jossey-Bass.
- Scharpf, F.W., 1997. *Games real actors play : Actor-centred institutionalism in policy research*, Oxford: westview Press.
- Schelling, T.C., 1984. *Choice and consequence*, Cambridge, MA: Harvard University Press.
- Schlager, E. & Ostrom, E., 1992. Property-rights regimes and natural resources: a conceptual analysis. *Land economics*, 68(3), pp.249–262.
- Schlozman, K.L., Verba, S. & Brady, H.E., 2012. *The unheavenly chorus: Unequal political voice and the broken promise of American democracy*, Princeton, N.J.: Princeton University Press.
- Schofield, N., 1985. Anarchy, altruism and cooperation: A review. *Social choice and welfare*, 2, pp.207–219.
- Schulz, W., 2005. Political efficacy and expected political participation among lower and upper secondary students. In *ECPR General Conference*. Budapest.

- Schutt, R.K., 2012. *Investigating the social world : The process and practice of research*, London: Sage Publications.
- Schweitzer, J., 1996. A description of the “sense of community in Lansing neighbourhoods” project. In *Conference on Defining Community, Reinforcing Society*. Michigan: University of Michigan.
- SCP, 2004. *Exploring sense of community: an annotated bibliography*, Sense of Community Partner, Calgary Alberta.
- Seabright, P., 1996. Accountability and decentralisation in government: An incomplete contracts model. *European Economic Review*, 40(1 SPEC. ISS.), pp.61–89.
- Searle, J.R., 2002. *Consciousness and language*, Cambridge, MA: Cambridge University Press.
- Sen, A., 1970. *Collective choice and social welfare*, New York: Elsevier Science Publishing Company.
- Sen, A., 2000. *Social exclusion: Concept, application and scrutiny*, Asian Development Bank, Manila.
- Sen, A. & Dreze, J., 2002. *India: Development and participation*, Oxford, UK: Oxford University Press.
- Sethi, R., 2008. Reciprocity and collective action. *The new palgrave dictionary of economics*.
- Sethi, R. & Somanathan, E., 2001. Preference evolution and reciprocity. *Journal of Economic Theory*, 97, pp.273–97.
- Shapiro, I., 2002. Optimal deliberation? *Journal of Political Philosophy*, 10(2), pp.196–211.
- Shepsle, K.A., 1991. Discretion, institutions, and the problem of government commitment. In P. Bourdieu & J. S. Coleman, eds. *Social theory for a changing society*. New York: Westview Press, Russell Sage Foundation.
- Shepsle, K.A., 2009. Rational Choice Institutionalism. In S. A. Binder, R. W. . Rhodes, & B. A. Rockman, eds. *The oxford handbook of political institutions*. Oxford: Oxford University Press.
- Siddiqui, S. et al., 2009. Framework for assessing governance of the health system in developing countries: Gateway to good governance. *Health Policy*, 90(1), pp.13–25.
- Simon, H., 1986. Rationality in psychology and economics. In R. M. Hogarth & M. W. Reder, eds. *The rational choice: the contrast between economics and psychology*. Chicago: University of Chicago Press.
- Singh, S., 2007. Water and local governments: Institutional design, politics and implementation. In S. Singh & P. K. Sharma, eds. *Decentralisation: Institutions and politics in rural India*. New Delhi: Oxford University Press.
- Smith, G., 2009. *Democratic innovations : Designing institutions for citizen participation*, Cambridge: Cambridge University Press.
- Sniderman, P.M. & Levendusky, M.S., 2007. An institutional theory of political choice. In R. J. Dalton & H.-D. Klingemann, eds. *Oxford handbook of political behaviour*. Oxford: Oxford University Press.

- Srivastava, R., 1989. Political efficacy: comparative study of United States, United Kingdom and India. *Youth & Society*, 21(2), pp.170–195.
- Steenbergen, M.R. et al., 2003. Measuring political deliberation: A discourse quality index. *Comparative European Politics*, 1(1), pp.21–48.
- Stokes, S., 1998. Pathologies of deliberation. In J. Elster, ed. *Deliberative democracy*. Cambridge: Cambridge University Press.
- Stromer-Galley, J., 2007. Measuring deliberation's content: A coding scheme. *Journal of Public Deliberation*, 3(1), pp.1–36.
- Sugden, R., 2004. *The economics of rights, co-operation and welfare* 2nd ed., Basingstoke: Palgrave Macmillan.
- Sunstein, C.R., 2002. The law of group polarization. *Journal of Political Philosophy*, 10(2), pp.175–195.
- Suryanarayana, M., Agarwal, A. & Prabhu, S.K., 2011. *Inequality-adjusted Human Development Index for India's states: 2011*, New Delhi.
- Svensson, J., 2005. Eight questions about corruption. *Journal Economic Perspectives*, 19(3), pp.19–42.
- Swidler, A. & Watkins, S., 2011. Practices of deliberation in rural Malawi. In *Conference on deliberation and Development: New Directions*. Washington, DC: World Bank.
- Tabachnick, B.G. & Fidell, L.S., 2013. *Using Multivariate Statistics*, Boston: Allyn & Bacon.
- Tadros, M., 2013. *Decentralisation and social cohesion in religiously heterogeneous societies in transition: a case study from Egypt*, Institute of Development Studies, Sussex.
- Tanzi, V., 1995. Fiscal federalism and decentralization: A review of some efficiency and macroeconomic aspects. In *Annual Conference on Development Economics*. World Bank, Washington, D.C.
- Tiebout, C.M., 1956. A pure theory of local expenditures. *The Journal of Political Economy*, 64(5), pp.416–424.
- Tinker, H., 1968. *The foundations of local self-government in India, Pakistan, and Burma*, New York: Praeger, Pall Mall P.
- Treisman, D., 2007. *The architecture of government: Rethinking political decentralisation*, Cambridge, MA: Cambridge University Press.
- UCLG, 2015. UCLG Decentralisation and Local Self-Government Committee. Available at: http://www.uclg-decentralisation.org/sites/default/files/glossary_uclg_decentralisation_localselfgovernment_committee_eng.pdf [Accessed March 15, 2015].

UNDP-GII, 2015. Gender Inequality Index 2014. Available at: <http://www.in.undp.org/content/india/en/home/countryinfo/challenges.html> [Accessed January 11, 2016].

UNICEF - WHO, 2015. *Progress on drinking water and sanitation: 2015 update*, New York. Available at: <http://www.unicef.org/media/files/JMPReport2012.pdf>.

United Nations. (2007). Public governance indicators: A literature review. The Department of Economic and Social Affairs, United Nations, New York.

United Nations, 2014. Ensuring women's access to safe toilets is "moral" imperative. Available at: http://www.un.org/apps/news/story.asp?NewsID=49378#.VOpB5_nGpu0 [Accessed January 2, 2016].

United Nations, 2010. The human right to water and sanitation. Available at: http://www.un.org/waterforlifedecade/human_right_to_water.shtml [Accessed February 22, 2015].

Vaus, D. de, 2014. *Surveys in social research* 6th Edition. Abingdon: Routledge.

Vedeld, T., 2000. Village politics: Heterogeneity, leadership and collective action. *Journal of Development Studies*, 36, pp.105–134.

Verba, S., Schlozman, K. & Brady, H., 1995. *Voice and equality: Civic voluntarism in American politics*, Cambridge, MA: Harvard University Press.

Vijayalakshmi, V., 2008. Rent-seeking and gender in local governance. *Journal of Development Studies*, 44(9), pp.1262–1288.

Vir, D., 1989. *Political efficacy in urban India: A sociological exploration*, New Delhi: Classical Publication Company.

Vyas, S. & Kumaranayake, L., 2006. Constructing socio-economic status indices: How to use principal components analysis. *Health Policy and Planning*, 21(6), pp.459–468.

Vyasulu, V., 2007. Local finances after the 73rd constitutional amendment. In S. Singh & P. Sharma, eds. *Decentralisation: Institutions and politics in rural India*. New Delhi: Oxford University Press.

Wagstaff, A. & Doorslaer, E. van, 2000. Equity in health care finance and delivery. In A. Culyer & J. Newhouse, eds. *Handbook of health economics*. Amsterdam: Elsevier (North-Holland), pp. 1803–1862.

Wampler, B. & Avritzer, L., 2004. Participatory publics: Civil society and new institutions in democratic Brazil. *Comparative Politics*, 36(April), pp.291–312.

Wandersman, A. & Giamartino, G., 1980. Main content area Community and Individual Difference Characteristics as Influences on Initial Participation. *American Journal of Community Psychology*, 8(2), pp.217–28.

Weiner, M., 2001. The struggle for equality : Caste in Indian politics. In A. Kohli, ed. *The success of Indian democracy*. New York: Cambridge University Press.

- Weingast, B., 1997. The political foundations of democracy and the rule of law. *American Political Science Review*, 92(2), pp.245–263.
- Weingast, B.R., 2003. A postscript to “political foundations of democracy and the rule of law.” In J. M. Maravall & A. Przeworski, eds. *Democracy and rule of law*. Cambridge: Cambridge University Press.
- Weingast, B.R. & Moran, M.J., 1983. Bureaucratic discretion or congressional control? Regulatory policymaking by the Federal Trade Commission. *Journal of political economy*, 91(5), pp.765–800.
- WHO, 2011. *Guidelines for drinking water quality*, World Health Organization, Geneva.
- Widmalm, S., 2005. What are decentralisation and Panchayati Raj reforms, and who likes them? In L. Jain, ed. *Decentralisation and local governance*. New Delhi: Orient Longman.
- Williamson, O.E., 1996. *The mechanisms of governance*, New York: Oxford University Press.
- Williamson, O.E., 2007. *Transaction cost economics: an introduction*, Institut für Weltwirtschaft, Kiel.
- Wilson., J.Q., 1989. *Bureaucracy : What government agencies do and why they do it*, New York: Basic books.
- Woolcock, M., 2011. What distinctive contribution can social cohesion make to development theory, research, and policy? In *Conference on Social Cohesion and Development*. Paris: OECD Publishing.
- Wooldridge, J.M., 2013. *Introductory econometrics : A modern approach* 5th Edition., Mason OH: South-Western Cengage Learning.
- World Bank, 2004. *India: Fiscal decentralization to rural governments*, Rural Development Unit, South Asia Region, World Bank, Washington, D.C.
- World Bank, 2007. *India: Rural governments and service delivery*, Washington, D.C.
- World Bank, 2006. *Local governance in developing countries*, World Bank, Washington, D.C.
- World Bank, 2001. *Overview of rural decentralisation in India: Volume 1*, World Bank, Washington, D.C.
- World Bank, 2015. Political decentralization. Available at: <http://www1.worldbank.org/publicsector/decentralization/political.htm#2> [Accessed March 17, 2015].
- World Bank (a), 2008. *Norms for rural water supply in India*, Washington, D.C.
- World Bank (b), 2008. *Review of effectiveness of rural water supply schemes in India*, Washington, D.C.
- Wright, J.D., 1981. Political disaffection. In S. Long, ed. *The handbook of political behaviour, volume 4*. New York: Springer.

WSP, 2010. *From dreams to reality: compendium of best practices in rural sanitation in India*, Water and Sanitation Programme, World Bank, Washington, D.C.

WSP (a), 2011. *A decade of total sanitation campaign: Rapid assessment of processes and outcomes*, Water and Sanitation Programme, World Bank, Washington, D.C.

WSP (b), 2011. *Economic impact of inadequate sanitation in India*, Water and Sanitation Programme, World Bank, Washington, D.C.

WSP-MDWS, 2014. *What works at scale? Distilling critical success factors in scaling up Rural Sanitation*, Water and Sanitation Programme-World Bank; and Ministry of Drinking Water and Sanitation-government of India, Washington, D.C - New Delhi.

WSP-World Bank, 2012. *Review of World Bank support to the rural water supply and sanitation sector in India*, Water and Sanitation Programme, World Bank, Washington, D.C.

Young, I.M., *Inclusion and democracy*, Oxford: Oxford University Press.

APPENDICES

A.1 REVIEW OF EMPIRICAL LITERATURE ON LOCAL GOVERNANCE

Rondinelli, Cheema and John (1983) in their wide ranging survey of countries which have decentralised, found (1) Degree of political commitment and administrative support from higher levels of Government, (2) Centrist tendencies in attitudes and behaviour, (3) Appropriateness of the policies and programs, and (4) Inadequate financial, human and physical resources and (4) Lack of capacity: technical, managerial and leadership at local level; determine efficiency, responsiveness and self-reliance in achieving objectives of decentralisation.

Litvack, Ahmad and Bird (1998) in their review of World Bank's experience in decentralisation, stresses the (1) Need for incentivizing political participation from concerned sections of the community to elicit all preferences (2) Provision for inter-Governmental transfer of resources to ensure inter-regional equity (3) Balancing soft and hard budget constraints in revenue raising and expenditure to ensure adequateness in provision (5) Determining what is taxed and the incidence of that tax, to achieve interpersonal equity (4) Providing clarity about roles in the governance system and making information about it available to all concerned and (5) Building political capability to elicit preferences and respond to them, and administrative capability to deliver services according to preferences; as essential to achieve responsiveness and accountability in decentralised governance. Similarly, Ayers (2003), based on World Bank's experience in decentralisation asserts World Bank supports decentralisation as it promotes responsiveness, accountability and participation; thereby leading to better matching of services to local preferences. However, she also cautions that to be successful Local Governments should have access to adequate resources, mechanism to ensure participation by all sections and strong monitoring system from the citizens and the Central Government.

Prud'Homme (1995) observed if decentralisation is not designed well in terms of what public good functions to decentralise, in which sectors, in which regions and who should provide it (Local, Central or joint); it can promote inter-regional disparities, competition among the Local Governments leading to the 'race to the bottom' situation, macroeconomic instability, economic inefficiency, low quality of bureaucracy and corruption. He concluded in decentralisation key question is not 'whether to' but 'what and how to' decentralise.

Tanzi (1995) also argues, key to success lies in design of the institutions. Likening the relationship between the Central and the Local Governments to a contract; he observes, for effective decentralisation, the design should provide for clear and enforceable constitutional and legal

frameworks, adequate scope for monitoring and controlling local public expenditure and incentivise quality in bureaucracy.

Bardhan and Mookherjee (2001) on similar lines notes, in the design, expenditure decentralisation must be matched by revenue decentralisation. However, higher revenue decentralisation, though can expand the volume of services, can result in overprovision to elites at the expense of the poor, as Local Government are susceptible to capture by elites. Under such circumstances they recommend user fees (which are non-coercive) can be a well fare maximising option, as against the taxes.

Concerns raised by above authors acquires further significance in the developing country context due to inherent poor institutions, poor administration and poor capacity (Litvack, Ahmad and Bird 2003). Success of decentralisation in some instances generated cautious optimism about decentralisation with a feeling though not a panacea, it has many virtues and is worth pursuing (Faguet 2013). However, inability to replicate the success, for instance as in Porto Allegro (see Avritzer 2000, Wampler and Avritzer 2004, Nyle 2002); and attempts to address the concerns raised by earlier studies drew attention to the local social, political, economic and cultural factors which are exogenous to the decentralised governance system, but might bear their influence on them.

Crooks and Manor (1998) observed democratic participation in the form of citizen engagement with public institutions; has implications on commitment of officials, accountability mechanisms and responsiveness as in congruence between policy objectives and citizen preference. However, they conclude these were influenced by degree of social and political mobilization in the community and local political situation. Bardhan and Mookherjee (2006) explains achieving responsiveness and accountability in decentralised governance, requires educated and politically aware citizenry; competitive, free and fair elections; participation from all sections of the community, absence of high socio-economic inequality, law and order, political stability, source of information such as free and independent media, and effective oversight mechanisms, formal or informal. Grindle (2007) in her study of decentralisation in Mexico, finds competitive elections, state entrepreneurship as in innovativeness is setting policy and agenda and using public resources, modernization of public sector and vibrant civic societies promotes the objectives of decentralisation⁴⁹. Treisman (2007) in his study of political decentralisation (2007) admits that decentralisation nurtures civic spirit and political skills, though in a bad way through nepotism, bribery and partisan conflict. He finds successful decentralisation requires transparency, popular participation, rule of law, clearly stated rules which limit abuse by Government. However, he remains generally sceptical about the usefulness of decentralisation and attributes its popularity to

⁴⁹ See Tendler (1997) for similar views on civic organisations

romanticism and spill over effect of success found in market decentralisation. He concludes by saying decentralizing governance in a particular place and time is very much a leap into the dark (ibid:274). Faguet (2008) and Faguet and Sanchez (2008) based on their study of decentralization in Columbia and Bolivia concludes, for decentralisation to work well: (1) Local democracy must be transparent, fair and competitive; (2) Local Governments must face hard budget constraints with significant tax-raising powers; and (3) Balance in power between economic (private) actors, political actor and civil society actors such that one cannot distort the other. When it is balanced, even the poorest citizen has the voice in policy debate which can countervail the power of private firms and politico-bureaucratic interests

Putnam *et al* (1993) in their seminal work on Italian regional Governments, finds that decentralisation efforts were more successful in regions rich in social capital, built through historic traditions of participatory civic culture which promoted coordination, cooperation, reciprocity, trust, law-abidingness, civic engagement, horizontal participation patterns in social and political situations. The study also observed, formal political institutions do have the capability to generate social capital, albeit in a gradual manner. They conclude building social capital through participatory mechanisms is key to make democracy work in those regional Governments. Cusack (1997) in his study of German Local Governments, Coffe and Geys (2005) in their study of Finnish Local Governments and Lowndes and Wilson (2001), in their study of English Local Governments also found that social capital enhances institutional performance and they also argued that institutional design is also important in the extent it incentivises civic associations. Similarly, De Mello (2004) in his cross country empirical evaluation found decentralisation boosts social capital and extent of decentralisation is positively associated with associational activity.

Tadros (2013) in her study of devolution of power in Egypt, found that it can promote cohesion in religiously diverse communities through convergence achieved by participation from different religious groups. However, she also cautions to elicit and sustain this convergence; inclusivity, rule of law, independent media and proper oversight mechanisms are required. Marc, Willman, Aslam *et al.* (2013) in their extensive study of decentralisation in Uganda observes cohesion in an ethnically heterogeneous context is weakened by sense of injustice and unfairness; and decentralisation can be a means to reduce this through equitable allocation of services. Brancati (2006) in an empirical analysis of 30 countries found decentralisation promotes cohesion by reducing ethnic conflict and secessionism though proximity of the Government and the opportunities to participate in it. However, if regional political parties are not regulated through an institutional mechanism then they can undermine the gains of decentralisation through identity politics.

A.2 REVIEW OF EMPIRICAL LITERATURE ON DELIBERATION IN POLITICS

Avritzer (2000) in his analysis of The Participatory Budgeting, a process of public deliberation involving common citizens, social actors and neighbourhood associational members, on the allocation of budget resources in Porto Alegre, Brazil, found that public deliberation has the capacity to solve contentious issues at local level in several ways. First, it improved access to local public goods by making information on their distribution available and connecting it to the deliberative process. Second, it solved clientilism by incentivising association and disincentivising clientilism. Third, it improved democratic skills such as negotiation, forming coalitions, conception of justice and thereby increased their deliberative equality in capacity to make equal choices. However extension of this to other areas did not generate the same effects and reasons were attributed to role of institutional actors, local political culture and availability of fiscal base and size of the jurisdiction (See Nyle 2002)

Fujiwara and Wantchekon (2013) conducted a field experiment in Benin to find out whether informed public deliberation overcomes clientilism. They used the context of national Presidential election, to have two groups; experimental group treated to a campaign strategy based exclusively on town hall meeting in which policy proposals were presented in a non-partisan manner informed by academic research and followed by a public deliberation on them. The control group was treated to routine campaigning and electoral promises. They found that in experimental group clientilistic practices were reduced, mobilisation equally good and possibly more effective in rising votes than clientilistic strategies especially in areas where candidate does not have a strong political hold.

Barron, Diprose and Woolcock (2011) analysed the mediating impact of deliberative spaces in a World Bank funded development project (KDP) in Indonesia. They found that the development projects have a tendency to trigger local conflict due to competition over resources. The deliberative processes of KDP project makes these conflicts far less likely to escalate or turn violent, as the decision in these processes emerge through a consultative process which involves community and hence perceived as legitimate and equitable.

Swidler and Watkins (2011) in their ethnographic study of deliberative practices in rural Malawi in conjunction with study on role of networks in HIV/AIDS epidemic; found a marked difference between quality of deliberation in formal and informal settings. In induced deliberative forums organised by development institutions, participants' behaviour resembled that of students in rote-learning class with one-way communication; whereas in natural settings they engage vociferously on a variety of local issues including moral principles. They conclude that if purpose of deliberative forums is to allow for the disadvantaged to make their voice heard and get even results, then such forums and institutions may not be set up as formal institutions.

Humphreys, Masters and Sandbu (2006) report on the role of leaders in democratic deliberation based in their study based in Sao Tome and Principe in Africa. These Island nations under the aegis of United Nations Development Program in 2004, held nationwide forums in which citizens gathered and deliberated on economic policy priorities. The Leaders to moderate the discussion were randomly assigned across the forums. The study found that conditions for deliberations were fairly good and participation had an intrinsic benefit on the participant. However, preferences of the participants and the outcome were systematically influenced by leader's own preferences, though, not through coercion or persuasion, more because of self-censorship by participants to align their preferences to that of leader's. Authors admit that the methodology of the study was 'less than clean' and results have several caveats.

Morrison and Singer (2007) in their study of '2000 National dialogue', a nation-wide deliberative exercise in Bolivia, examined the role of deliberative approach in two distinct policy areas, allocation of debt relief funds and mechanisms of social control through citizen monitoring. Conditions for practice of deliberation were present in the former and not in the latter. In the deliberative process for arriving at the formula for allocation of debt relief the participants were equal and the outcomes were enacted as laws and the mechanism was working when reviewed in '2004 national dialogue' and legitimacy conferred by the deliberative process has prevented departments from reallocating the funds to other activities. Whereas in the non-deliberative process for arriving at social control through citizen monitoring there were inequalities between civilian participants with different interests which has led to its erratic implementation, lack of coordination between vigilant committees and by '2004 National Dialogue' it had essentially ceased to exist. This study highlights the importance of equality between participants for sustained successful deliberative outcomes.

A.3 FIELD SURVEY QUESTIONNAIRES

A.3.1 Panchayat Questionnaire

Section 1: General information about Panchayat

1.1 Population, social and economic profile

101. General information about Panchayat			
Name of the Panchayat			
Name of the Taluk in which Panchayat is located			
Name of the district in which Panchayat is located			
102. Please give details of households in the Panchayat			
102A. Household details: social groups wise	Panchayat	Panchayat HQ	Note
Total Households			Mention in numbers
Scheduled Caste (SC) households			
Scheduled Tribe (ST) households			
Other households			
102B Household details: economic status wise			
Below Poverty Line (BPL) households			Mention in numbers
Above Poverty Line (APL) households			
Anthyodaya households			
Other households			
103. Panchayat population and literacy rate			
Population	Panchayat	Panchayat HQ	Note
Total males			Mention in numbers
Total females			
Total literacy (percentage)			
104. How many different languages are spoken in the Panchayat jurisdiction			
Category	Panchayat	Panchayat HQ	Note
Languages (with their own alphabets)			Mention in numbers
Dialects (without their own alphabets)			
105. Facilities available in the Panchayat jurisdiction			
Category	Panchayat	Panchayat HQ	Note
Post offices			Mention in numbers
Cooperative societies			
Banks			
Fair price shop			
Bus stop			
Trading shops			
Primary school (1-4) (private and Government)			
Higher primary school (5-7) (private and Government)			
High school (8-10) (private and Government)			
Pre-university/undergraduate colleges (private and Government)			
Child care centre			
Health sub centre			
Primary Health Care (PHC) centre			
Community Health Care (CHC) centre			
Private clinics and hospitals			
Cinema houses			
Churches/temples/mosques/other religious institutions			

Internet cafe			
Financial institutions			
Village Accountant's (VA) office			
Library			
Fertiliser shops (private/Government/cooperative)			
Veterinary clinics/hospitals			
Specify			

106. Transport facilities from Panchayat headquarters			
Category	Taluk HQ	District HQ	Note
Number of trips per day by buses of public transport system			Mention in numbers
Average fare one way in these buses (in INR)			
Approximate number of private vehicles available for hire			

107. Transport links to Panchayat headquarters village					
Category	Panchayat HQ village has links				Note
National highway	No ⁰	☐	Yes ¹	☐	Mention in numbers
State highway	No ⁰	☐	Yes ¹	☐	
Railway station	No ⁰	☐	Yes ¹	☐	

108. What are the major cultural/community events which takes place in the Panchayat Jurisdiction? (No information: NI / Not applicable: NA) (Note: Specify only events in which all sections of community participates)				
Name of the event	Which social groups participates	How many people participate	How many times in a year	Note

1.2 Political structure of the Panchayat

109. Details of the electorates in the Panchayat			
Category	Men	Women	Note
Total			

110. Percentage of people within the Panchayat jurisdiction who voted in the last held elections		
Category	Total	Note
National election (Mention district average)		Mention in percentage
State election (Mention district average)		
District Panchayat election (Mention district average)		
Taluk Panchayat election (Mention Taluk average)		
Gram Panchayat election (Mention taluk average)		

111	Are Panchayat's president and vice-president position reserved?												
	Current term						Last term						Note
	Caste				Women		Caste				Women		
President	SC ¹	☐	ST ²	☐	No ⁰	☐	SC ¹	☐	ST ²	☐	No ⁰	☐	
	OBC ³	☐	General ⁴	☐	Yes ¹	☐	OBC ³	☐	General ⁴	☐	Yes ¹	☐	
Vice president	SC ¹	☐	ST ²	☐	No ⁰	☐	SC ¹	☐	ST ²	☐	No ⁰	☐	
	OBC ³	☐	General ⁴	☐	Yes ¹	☐	OBC ³	☐	General ⁴	☐	Yes ¹	☐	

112. In the current term; how many Panchayat member positions are reserved ?(No information: NI / Not applicable: NA)										
Total wards	Total member positions	General		Scheduled Caste (SC)		Scheduled Tribe (ST)		Other Backward Caste (OBC)		Note
		Total	Women	Total	Women	Total	Women	Total	Women	

113. In the current term; how many Panchayat member positions are reserved in the Panchayat HQ village (No information: NI / Not applicable: NA)										
Total wards	Total member positions	General		Scheduled Caste (SC)		Scheduled Tribe (ST)		Other Backward Caste (OBC)		Note
		Total	Women	Total	Women	Total	Women	Total	Women	

114 Profile of the current President, Vice-President, PDO and the Secretary of the Panchayat									
Position	Native village	Age	Caste	Gender ^B	Education ^C	Occupation ^D	How many times ^E	APL/BPL	Note
President									
Vice-President									
PDO									
Secretary									

A: 1: SC; 2: ST; 3: OBC; 4: General; B: 1: Male; 2: Female; C: 1: Illiterate; 2: Literate; 3: Primary School; 4: Middle School; 5: High School; 6: PUC; 7: Degree and above; D: 1: Labourer; 2: Farmer; 3: Trader; 4: Employed – Pvt; 5: Pensioner; E: mention the number of terms elected for Panchayat office

115 Was there any 'no confidence motion' against President and/or vice-president in the last term?		
No	If yes, what are the reasons?	Note
☐		Mention briefly and succinctly

116 Profile of the current elected members of the Panchayat									
Position	Native village	Age	Caste ^A	Gender ^B	Education ^C	Occupation ^D	How many times ^E	APL/BPL	Note

A: 1: SC; 2: ST; 3: OBC; 4: General; B: 1: Male; 2: Female; C: 1: Illiterate; 2: Literate; 3: Primary School; 4: Middle School; 5: High School; 6: PUC; 7: Degree and above; D: 1: Labourer; 2: Farmer; 3: Trader; 4: Employed – Pvt; 5: Pensioner; E: mention the number of terms elected for Panchayat office

117 Currently how many associations are active within the Panchayat jurisdiction?			
Category	Panchayat	Panchayat HQ	Note
Religious /caste associations			
Trader's association			
Farmers' associations			
Milk producers' association			
Women's self-help groups (Sthree Shakthi groups)			
Other self-help groups (SHGs)			
Youth clubs/associations			
Voluntary/not for profit associations			

118 Within the Panchayat jurisdiction how many associations are actively working in the fields mentioned below			
Area/Field	How many	In Panchayat HQ	Note

1.3 Availability of water and sanitation facilities/services within the Panchayat jurisdiction

119	Information on water, sanitation and hygiene related services provided by the Panchayat				
Category	2010-11		2012-13		Note
	Panchayat	Panchayat HQ	Panchayat	Panchayat HQ	
Services for individual Households					
Water tap provided by Panchayat					Mention how many were there in 2010-11 and in 2012-13
Toilet provided by Panchayat					
Toilets provided under housing scheme of Panchayat					
Public services					
Hand pump					
Public tap					
Open well					
Mini water tank					
Overhead water tank					
Total public toilets					

Total garbage bins					
Waste management facilities					
Total Sewer in meters					
Specify					

120	Water and sanitation facilities/services provided to Child care centres, health sub centres and schools by the Panchayat			
Category	2010-11		2012-13	
	Panchayat	Panchayat HQ	Panchayat	Panchayat HQ
Hand pump				
Open well				
Mini water supply scheme				
Toilets				
Garbage bins				
Platforms				
Soak pits for waste water				
Sewer in metres				

121	Number of households with their own facility for water				
Category	2010-11		2012-13		Note
	Panchayat	Panchayat HQ	Panchayat	Panchayat HQ	
Total number of households					

122	How many water samples drawn within the Panchayat jurisdiction were sent for testing for potability			
	2010-11	2012-13	Note	
Total water samples sent for testing			verifv	

123	in 2012-13 how many health awareness programmes were conducted by the Panchayat itself or with its assistance			
Programmes	How many	Total participants	Total cost	Note
				Verify

1.4 Panchayat staff

124	Information about current staff of the Panchayat										Note
	Present				Edu ^A	FT/PT ^B	How many years ^C	Training ^D	Total GP ^E		
PDO	No ⁰	☐	Yes ¹	☐							
Secretary	No ⁰	☐	Yes ¹	☐							
Accounts Asst	No ⁰	☐	Yes ¹	☐							
Specify	No ⁰	☐	Yes ¹	☐							

A:1: Illiterate; 2: Literate; 3: Primary School; 4: Middle School; 5: High School; 6: PUC; 7: Degree and above;
B: Full time / Part time; C: How many years of service in this Panchayat; D: How many training programs they have attended; E: How many Panchayats they are in charge of

125	Details of the staff appointed by the Panchayat				
	2010-11		2012-13		Note
	Panchayat	Panchayat HQ	Panchayat	Panchayat HQ	
Data operator					
Clerk					
Peon					
Bill collector					
Watermen					
Sweepers					

126	Information displayed in the notice board in Panchayat head office (Do not consider pamphlets and posters)											
Information		Is it updated?					Legible and easy to read				Note	
On Sakaala (GSC)		No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	

On MGNAREGA scheme	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
On Panchayat committees and sub committees	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
On Right to Information Act (RTI)	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
On annual income and expenditure of the Panchayat	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
On annual works undertaken by Panchayat	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
List of beneficiaries of housing scheme	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
On Public Distribution System (PDS)	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
On citizen charter	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	
Specify	No ⁰	☐	Yes ¹	☐	NA	☐	No ⁰	☐	Yes ¹	☐	

127	Availability of power in the current year										
After Sankranti festival (January – March)					Single phase			Three Phase			
How many hours of power was available					Hours			Hours			
					NR ⁹⁸	☐	DK ⁹⁹	☐	NR ⁹⁸	☐	DK ⁹⁹
After ugaadhi festival (April-May)											
How many hours of power was available											
					NR ⁹⁸	☐	DK ⁹⁹	☐	NR ⁹⁸	☐	DK ⁹⁹

Section 2: Program planning: Meetings and committees

2.1 Program planning processes

201	Program planning documents prepared by the Panchayat										
2010-11											
Panchayat program plan for the coming year					No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
Panchayat annual budget					No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
Annual health activity plan prepared by VHSNC					How many				NI ⁹⁷	☐	
2012-13											
Panchayat program plan for the coming year					No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
Panchayat annual budget					No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
Annual health activity plan prepared by VHSNC					How many				NI ⁹⁷	☐	

Information on Ward Sabhas and Gram Sabhas held in 2010-11

202	How many Ward Sabhas were held in 2010-11			
		Panchayat	Panchayat HQ	Verify meeting minutes book
Total Ward Sabhas held				
Total participants: Male				
Total participants: Female				

203	How many Gram Sabhas were held in 2010-11			
		Panchayat	Panchayat HQ	Verify meeting minutes book
Total Gram Sabhas held				
Total MGNAREGA Gram Sabhas held separately				
Total MGNAREGA Gram Sabha held along with regular Gram Sabhas				

204	Information on first and last held Gram Sabhas in 2010-11			
		First Gram Sabha	Last Gram Sabha	Note
On which date meeting was held?				
At what time meeting ng was started?				
In which place the meeting was held?				
Who presided the meeting?				
Total participants: Overall				

Total participants: Women			
Total participants: Villagers			
Total participants: Elected members of the Panchayat			
Total Participants: Panchayat staff			
Total participants: from Government departments			
Total participants: others			

205	Decisions taken in the Gram Sabhas held in 2010-11		
	First	Last	
Total number of decisions taken			
Out of these how many were taken on the following issues			
Related to review of programs			
Related to selection of beneficiaries for various schemes			
Related to Water, sanitation and hygiene			
Related to other health issues			
Related to education and schools			
Related to improvement to child care centres			
Related to fair price shops			
Related to street lights and roads			
Related to other development issues			
Related to improving Panchayat's own revenue source			
Related to local issues			
Other issues			

206	In the minutes of the Gram Sabha meetings held in 2010-11 are the following program planning document reviewed/approved							
Panchayat's annual budget	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Annual activity plans	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Village health activity plan	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Jamaa Bandhi report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
MGNAREGA social audit report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Annual income and expenditure of Panchayat (Form 55)	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐

207	Maintenance of the minutes book of the Gram Sabha meetings held in 2010-11			
	First		Last	Notes
Is meeting date and time mentioned?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Is the minutes of the meeting completely written (verify whether signed by President)?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Have all the participants signed in the minute's book?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Are there empty spaces/pages after or before the minutes?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Does the minutes book has the all the certified pages?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐

208	How many special Gram Sabhas meetings were held in 2010-11? (Mention Children's Gram Sabha meeting here)		
Not held	How many held	For what purposes	
☐			Briefly mention

209	How many Ward Sabhas were held in 2012-13		
	Panchayat	Panchayat HQ	Verify

Total Ward Sabhas held			meeting minutes book
Total participants: Male			
Total participants: Female			

210	How many Gram Sabhas were held in 2012-13		
	Panchayat	Panchayat HQ	Verify meeting minutes book
Total Gram Sabhas held			
Total MGNREGA Gram Sabhas held separately			
Total MGNREGA Gram Sabha held along with regular Gram Sabhas			

211	Information on first and last held Gram Sabhas in 2012-13		
	First Gram Sabha	Last Gram Sabha	Note
On which date meeting was held?			
At what time meeting was started?			
In which place the meeting was held?			
Who presided the meeting?			
Total participants: Overall			
Total participants: Women			
Total participants: Villagers			
Total participants: Elected members of the Panchayat			
Total Participants: Panchayat staff			
Total participants: from Government departments			
Total participants: others			

212	Decisions taken in the Gram Sabhas held in 2012-13		
	First	Last	
Total number of decisions taken			
Out of these how many were taken on the following issues			
Review of programs			
Selection of beneficiaries for various schemes			
Related to Water, sanitation and hygiene			
Related to other health issues			
Related to education and schools			
Related to improvement to child care centres			
Related to fair price shops			
Related to street lights and roads			
Related to other development issues			
Related to improving Panchayat's own revenue source			
Related to local issues			
Other issues			

213	In the minutes of the Gram Sabha meetings held in 2012-13 are the following program planning document reviewed/approved							
Panchayat's annual budget	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Annual activity plans	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Village health activity plan	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Jamaa Bandhi report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
MGNREGA social audit report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Annual income and expenditure of Panchayat (Form 55)	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐

214	Maintenance of the minutes book of the Gram Sabha meetings held in 2012-13					
		First Gram Sabha		Last Gram Sabha		Notes
Is meeting date and time mentioned?	No ⁰	☐	No ⁰	☐		
	Yes ¹	☐	Yes ¹	☐		
Is the minutes of the meeting completely written (verify whether signed by President)?	No ⁰	☐	No ⁰	☐		
	Yes ¹	☐	Yes ¹	☐		
Have all the participants signed in the minutes book?	No ⁰	☐	No ⁰	☐		
	Yes ¹	☐	Yes ¹	☐		
Are there empty spaces/pages after or before the minutes?	No ⁰	☐	No ⁰	☐		
	Yes ¹	☐	Yes ¹	☐		
Does the minutes book has the all the certified pages?	No ⁰	☐	No ⁰	☐		
	Yes ¹	☐	Yes ¹	☐		

215	How many special Gram Sabhas meetings were held in 2012-13? (Mention Childrens' Gram Sabha meeting here)		
Not held	How many held	For what purposes	
☐		Briefly mention	

Information on last held Gram Sabha

216	Information on the most recently held Gram Sabha meeting					
On which date meeting was held?						
In which place the meeting was held?						
At what time meeting was started?						
How many days before the meeting, meeting notice was distributed?	Days	Notice not prepared		☐		
Did the meeting notice had the agenda of the meeting?	No ⁰	☐	Yes ¹	☐	NA ⁹⁶	☐
How was the information about the meeting publicised?	Distributing handouts ¹				☐	
	Tom tom ²				☐	
	Elected members of Panchayat ³				☐	
	Loud speakers ⁴				☐	
	Specify					
	Not publicised ⁰				☐	
	No response ⁹⁸				☐	
	Don't know ⁹⁹				☐	
Who presided the meeting?						
What reports were read out in the meeting?	Meeting notice ¹				☐	
	Minutes of previous meeting ²				☐	
	Implementation of decisions taken in previous meetings ³				☐	
	Income and expenditure till meeting date ⁴				☐	
	Government notices and orders ⁵				☐	
	specify					
	No response ⁹⁸				☐	
	Don't know ⁹⁹				☐	
Were the minutes of this meeting displayed in the notice board at the Panchayat office?	No ⁰	☐	Yes ¹	☐		

2.3 Information about General Meeting (Samanya Sabha)

Information on General Meetings held in 2010-11

217	How many General Meetings were held in 2010-11 and how many were postponed due to lack of quorum in 2010-11
------------	--

Total General Meetings held		Verify
Total General Meetings postponed due to lack of quorum		

218	Information on General Meetings held in 2010-11 (verify minutes book)												
	Meeting A ^A				Meeting B ^B				Meeting C ^C				
In which month meeting was held?	Month				Month				Month				
Who presided the meeting?													
Was PDO present	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	
Was Secretary present?	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	
Was President present?	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	
Was Vice-President present?	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	
Total Participants: Elected members													
Total Participants: Elected members: Male													
Total Participants: Elected members: Female													
Total Participants: Elected members: SC													
Total Participants: Elected members: ST													
Total Participants: Elected members: Panchayat HQ													

A: Select the first meeting held after the nomination of the president; B: Select the meeting held after the MGNREGA Gram Sabha; C: Select the last meeting held in financial year 2010-11

219	Decisions taken in the above General Meetings			
	Meeting A	Meeting B	Meeting C	
Total number of decisions taken				Mention after verifying the minutes book
Out of these how many were taken on the following issues				
Review of programs				
Selection of beneficiaries for various schemes				
Related to Water, sanitation and hygiene				
Related to other health issues				
Related to education and schools				
Related to improvement to child care centres				
Related to fair price shops				
Related to street lights and roads				
Related to other development issues				
Related to improving Panchayat's own revenue				
Related to local issues				
Other issues				

220	In the minutes of the General Meetings held in 2010-11 are the following program planning document reviewed/approved							
Panchayat's annual budget	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Annual activity plans	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Village health activity plan	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Jamaa Bandhi report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
MGNREGA social audit report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Annual income and expenditure of Panchayat (Form 55)	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐
Specify	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐

221	Maintenance of the minutes book of the General Meetings held in 2010-11		
	Meeting A	Meeting C	

Is meeting date and time mentioned?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Is the minutes of the meeting completely written (verify whether signed by President)?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Have all the participants signed in the minutes book?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Are there empty spaces/pages after or before the minutes?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Does the minutes book has the all the certified pages?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐

222	How many special General Meetings were held in 2010-11?		
Not held	How many held	For what purposes	
☐			Briefly mention

Information on General Meetings held in 2012-13

223	How many General Meetings were held in 2012-13 and how many were postponed due to lack of quorum in 2012-13		
Total General Meetings held			Verify
Total General Meetings postponed due to lack of quorum			

224	Information on General Meetings held in 2012-13 (verify minutes book)											
	Meeting A ^A				Meeting B ^B				Meeting C ^C			
In which month meeting was held?	Month				Month				Month			
Who presided the meeting?												
Was PDO present	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐
Was Secretary present?	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐
Was President present?	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐
Was Vice-President present?	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐	No ⁰	☐	Yes ¹	☐
Total Participants: Elected members												
Total Participants: Elected members: Male												
Total Participants: Elected members: Female												
Total Participants: Elected members: SC												
Total Participants: Elected members: ST												
Total Participants: Elected members: Panchayat HQ												

A: Chose the first meeting of the financial year; B: Chose the meeting conducted after the MGNREGA Gram Sabha; C: Chose the last meeting of the financial year 2012-13

225	Decisions taken in the above General Meetings in 2012-13			
	Meeting A	Meeting B	Meeting C	
Total number of decisions taken				Mention after verifying the minutes book
Out of these how many were taken on the following issues				
Review of programs				
Selection of beneficiaries for various schemes				
Related to Water, sanitation and hygiene				
Related to other health issues				
Related to education and schools				
Related to improvement to child care centres				
Related to fair price shops				
Related to street lights and roads				

Related to other development issues				
Related to improving Panchayat's own revenue				
Related to local issues				
Other issues				

226	In the minutes of the General Meetings held in 2012-13 are the following program planning document reviewed/approved								
Panchayat's annual budget	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	Mention after verifying the minutes book
Annual activity plans	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	
Village health activity plan	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	
Jamaa Bandhi report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	
MGNREGA social audit report	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	
Annual income and expenditure of Panchayat (Form 55)	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	
Specify	No ⁰	☐	Yes ¹	☐	Not prepared ²	☐	NI ⁹⁷	☐	

227	Maintenance of the minutes book of the General Meetings held in 2012-13			
		Meeting A	Meeting C	
Is meeting date and time mentioned?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Is the minutes of the meeting completely written (verify whether signed by President)?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Have all the participants signed in the minutes book?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Are there empty spaces/pages after or before the minutes?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐
Does the minutes book has the all the certified pages?	No ⁰	☐	No ⁰	☐
	Yes ¹	☐	Yes ¹	☐

228	How many special General Meetings were held in 2012-13		
Not held	How many held	For what purposes	
☐			Briefly mention

Information on last held Samanya Sabha

229	Information on the most recently held General Meeting					
On which date meeting was held?						
In which place the meeting was held?						
At what time meeting was started?						
How many days before the meeting, meeting notice was distributed?	Days	Notice not prepared			☐	
Did the meeting notice had the agenda of the meeting?	No ⁰	☐	Yes ¹	☐	NA ⁹⁶	☐
Who presided the meeting?						
What reports were read out in the meeting?	Meeting notice ¹					☐
	Minutes of previous meeting ²					☐
	Implementation of decisions taken in previous meetings ³					☐
	Income and expenditure till meeting date ⁴					☐
	Government notices and orders ⁵					☐
	specify					
	No response ⁹⁸					☐
	Don't know ⁹⁹					☐
Were the minutes of this meeting displayed in the notice board at the Panchayat office?	No ⁰	☐	Yes ¹	☐		

2.4 Statutory Committees, Functional Committees and Village Water and Sanitation Committee (VWSC)

230	Formation of Statutory Committees and holding their meetings				
	Formed on	Meetings in 2010-11	Meeting in 2012-13	Mention in number	
Social Justice Committee (SJC)					
Production Committee (PC)					
Civic Amenities Committee (CAC)					
231	Information formation of functional committees in Panchayat HQ village and holding their meetings				
	Formed on	Meetings in 2010-11	Meetings in 2012-13		
Village Health Sanitation and Nutrition Committee (VHSNC)					
Village Water and Sanitation Committee (VWSC)					
Food Security Committee (FSC)					
School Development and Monitoring Committee (SDMC)					
Village Forest Committee (VFC)					
Specify					

Village Water and Sanitation Committee (VWSC)

232	Formation of VWSC in the Panchayat jurisdiction		
	2010-11	2012-13	
Number of VWSC in the Panchayat jurisdiction			

233	In which year VWSC was formed in Panchayat HQ village		
Committee was not formed at all	☐		
If formed, mention in which year			
No response ⁹⁸	☐		
Don't know ⁹⁹	☐		

234	In Panchayat HQ village how many meetings of VWSC were held		
	2010-11	2012-13	
Totally how many meetings were held			

235	Information on participants in the meetings of VWSC				
	2010-11		2012-13		
	First meeting	Last meeting	First meeting	Last meeting	
Who preside the meeting?					
Was the President of VWSC present	☐	☐	☐	☐	
Was the Secretary of VWSC present	☐	☐	☐	☐	
Total Participants: Villagers					
Total Participants: Committee members					
Total participants: ex-officio committee members					
Total participants: committee members – women					
Total participants: committee members- scheduled caste					
Total participants: committee members – scheduled tribe					

Section 3: Program Management

3.1 Financial functions and processes

301	Information about annual activity plan (mention in lakhs)				
	Total estimated amount	Funds released		Total expenditure	
		How much	When		
Name of the activity plan					Mention in Lakhs. Ex: 2,34,000
2010-11					
2011-12					

					should be mentioned as 2.34
2012-13					

302	As per Form 55 Panchayat's Total Income and Expenditure					
	2010-11		2011-12		2012-13	
	Income	Exp	Income	Exp	Income	Exp
						Mention in lakhs

303	Panchayat's financial audit report: get a photocopy of the report				
	2010-11	2011-12	2012-13		
Financial audit report	☐	☐	☐		
Make sure that the report has the receipts and payments statement report					

Note: If audit report for 2012-13 is not available please get unaudited report on assets and liabilities and receipts and payment for the year. If this is not available get a copy of Form 55 for the year

304	From 2010-11 onwards has Panchayat received any awards or special schemes			
Awards/Schemes	From	Up to	Amount	
Jala Nirmal Scheme (JNS)				
Nirmala Grama Puruskaar (NGP)				
Gram Swaraj Scheme (GSS)				
Suvarna Gramodaya Scheme (SGS)				
Rajata Nairmalya Scheme (RNS)				
Swarna Nairmalya Scheme (SNS)				
Backward Region Growth Fund (BRGF)				

306	Currently, how many licences has been given by Panchayat for commercial purposes		
Category of license	Panchayat	Panchayat HQ	
			Mention in number

307	Sources of own revenue for the Panchayat and the amount collected			
	2010-11		2012-13	
	Demand	Collection	Demand	Collection
Water tax – ordinary				
Water tax - special				
House site tax				
House/building tax				
rent from buildings				
Entertainment tax				
Commercial license fee				

308	Currently, how much tax per month does Panchayat levy for the supply of water		
Ordinary tax		Tax is not levied	☐
Special tax		Tax is not levied	☐

309	When was the last two water tax revision done by Panchayat		
Mention in the year in which last revision of water tax was done	Year		
Mention the year prior to above when the tax was revised	Year		

310	Currently, how many months electricity bill for supply of water is due to be paid by the Panchayat		
How many months			
What is the total amount			

311	Maintenance of Panchayat bank accounts and cash book					
Bank account	Bank reconciliation month:		date of last entry in the cash book of 2012-13			
Panchayat own revenue account	Not done ⁰	☐	Done ¹	☐	Cash book not kept	☐ Date

Note: For checking bank reconciliation month; if you visit in June check April; similarly in July check May; in August check June

312	Information on entries in cashbooks related to housing schemes						
Indira Awas Scheme (IAS)							
In the cash book of 2012-13 of this scheme are there names other than those present in beneficiary list	Cash book not kept	☐	No ⁰	☐	NA ⁹⁶	☐	
	Ben list not kept	☐	Yes ¹	☐	NI ⁹⁷	☐	
Mention any 4 amounts entered in the cash book for the year 2012-13							
Ambedkar Housing Scheme (AHS)							
In the cash book of 2012-13 of this scheme are there names other than those present in beneficiary list	Cash book not kept	☐	No ⁰	☐	NA ⁹⁶	☐	
	Ben list not kept	☐	Yes ¹	☐	NI ⁹⁷	☐	
Mention any 4 amounts entered in the cash book for the year 2012-13							

3.2 Management of administrative functions

313	Management of registers							
Check at random whether items purchased in 2013-14 entered in stock register	Stock book not kept	☐	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Check at random whether an entry in mutation register is also found in assessment register	Mutation reg not kept	☐	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Check at random whether an entry in general receipt book is found in Demand Collection Book (DCB) also			No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Mention the date of the last entry in Samanya Mahathir book								

3.3 Grievance redressal and social audit

314	Information on application received under Sakaala (Guaranteed Service to Citizens)					
	2011-12	2012-13				
	Jan-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Modification of entries in assessment register						
Building license						
Trading/commercial license						
Drinking water management						
Street light management						
Village sanitation management						
Giving certificates						
Employment under MGNREGA						
NOC for getting electricity connection						
E-payment related to development works						
Getting job cards under MGNREGA						

315	Information on application received under Right To Information Act (RTI)		
	2010-11	2012-13	
Total number of applications received			
Attended to these applications within the stipulated time			

316	Information of social audit of MGNREGA Scheme						
2010-11							
Was the social audit done?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
Did the president of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
Did the PDO/Secretary of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐	
How many villagers participated in the audit					NI ⁹⁷	☐	
How many elected members of the Panchayat participated					NI ⁹⁷	☐	

2012-13						
Was the social audit done?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the president of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the PDO/Secretary of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
How many villagers participated in the audit					NI ⁹⁷	☐
How many elected members of the Panchayat participated					NI ⁹⁷	☐
317 Information on Jama Bandhi (General Social Audit)						
2010-11						
Has Jama Bandhi taken place	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the president of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the PDO/Secretary of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the Junior Executive Engineer participated in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
How many villagers participated in the audit					NI ⁹⁷	☐
How many elected members of the Panchayat participated					NI ⁹⁷	☐
Over how many sessions was Jama Bandhi conducted					NI ⁹⁷	☐
Has the report of the Jama Bandhi reached the Panchayat	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Has the report mentioned any issues for follow up:						
1.						
2011-12						
Has Jama Bandhi taken place	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the president of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the PDO/Secretary of Panchayat participate in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Did the Junior Executive Engineer participated in the audit?	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
How many villagers participated in the audit					NI ⁹⁷	☐
How many elected members of the Panchayat participated					NI ⁹⁷	☐
Over how many sessions was Jama Bandhi conducted					NI ⁹⁷	☐
Has the report of the Jama Bandhi reached the Panchayat	No ⁰	☐	Yes ¹	☐	NI ⁹⁷	☐
Has the report mentioned any issues for follow up:						
1.						

A.3.2 Individual Questionnaire

Section 1: information about respondent

1.1 Personal information about respondent

101	Respondent	
Gram Sabha participant who is a resident of Panchayat headquarters village		☐
Gram Sabha participant who is an elected member from Panchayat head quarter village		☐
102	Respondent's name, age and contact details	
Name		
Age in years		
Gender	Male ☐	Female ☐
Contact details		
Name of the village		
House number		
Name of the street/locality		
103	Up to what level you have been educated?	
Illiterate	☐	single selection
Literate	☐	
Primary school	☐	
Middle school	☐	
High school	☐	
PUC	☐	
Degree and above	☐	

Polytechnic / JOC	☐	
Specify		
No response	☐	

PUC: pre-university college; JOC: job oriented course

104	How do you identify yourself		single selection
	No response	☐	
105	What is your mother tongue?		single selection
	No response	☐	

106	What is your marital status		single selection
	Married	☐	
	Not married	☐	
	Divorcee	☐	
	Widow/widower	☐	
	NO response	☐	

107	What is your main occupation		single selection
	Agriculture/farming	☐	
	Daily wage labour	☐	
	Trading/self-employed	☐	
	Employee: Government	☐	
	Employee: private	☐	
	house wife	☐	
	pensioner/retired	☐	
	Honorarium based work	☐	
	Specify		
	No response	☐	

108	For how many years you have been serving in this post	
	Not applicable	☐
	No response	☐

Section 2: on service provision responsibilities of Panchayat

2.1 Panchayat processes related to provisioning of services

201	In which year Panchayat Raj act was brought into force		single selection
	Have not heard about it	☐	
	Heard about it, but do not know the year it was brought into force	☐	
	Heard about it and the year it was brought into force is	☐	
	No response	☐	

202	In your opinion what are the main responsibilities of the Panchayat		single selection
	Specify	☐	
	Specify	☐	
	Specify	☐	
	Specify	☐	
	Specify	☐	
	No response	☐	
	Don't know	☐	

203	Towards fulfilling above responsibilities; how should Panchayat gather peoples' preferences?		multiple selection
	Specify	☐	
	Specify	☐	
	Specify	☐	
	Specify	☐	
	No response	☐	single

Don't know	☐	selection
205	How should Panchayat publicise information about its services	
Specify	☐	multiple selection
single selection	☐	
Specify	☐	
Specify	☐	
Specify	☐	single selection
No response	☐	
Don't know	☐	

Section 3: Opportunities for peoples' participation in Panchayat's service provisioning processes

3.1 Awareness and participation in Panchayat's program planning processes

301	Have you heard about annual panchayat development plan and participated in it's preparation?	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years	☐	
No response	☐	
Don't know	☐	
302	Have you heard about annual panchayat annual budget and participated in its preparation	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years	☐	
No response	☐	
Don't know	☐	
303	Have you heard about annual village health plan and participated in it's preparation	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years	☐	
No response	☐	
Don't know	☐	

3.2 Participation in Ward Sabha and Gram Sabha

304	Have you heard about Ward Sabhas and participated in it				
Have not heard about it	☐	single selection			
Hear about it but have not participated in it	☐				
if you have participated, mention how many times in the last three years	☐				
No response	☐				
Don't know	☐				
305	Have you heard about Gram Sabha and participated in it				
Have not heard about it	☐	single selection			
Hear about it but have not participated in it	☐				
if you have participated, mention how many times in the last three years	☐				
No response	☐				
Don't know	☐				
306	What is the minimum number of times Ward Sabha and Gram Sabha should be convened in a year?				
Ward Sabha	☐				
Gram Sabha	☐				
No response	☐				
Don't know	☐				
307	Can all villagers participate in Ward Sabha and Gram Sabha?				
Ward Sabha	No	☐	Yes	☐	
Gram Sabha	No	☐	Yes	☐	

No response	☐	single
Don't know	☐	selection

308	What is the quorum requirement for convening Ward Sabha?	
No response	☐	single
Don't know	☐	selection

309	What is the quorum requirement for convening Gram Sabha?	
No response	☐	single
Don't know	☐	selection

310	What are the objectives of convening Gram Sabha?	
To plan Panchayat's activities	☐	multiple selection
Oversight of Panchayat's activities	☐	
Selection of beneficiaries	☐	
To get facilities	☐	
Disseminate information about Panchayat' activities	☐	
Specify	☐	
Specify	☐	single selection
No response	☐	
Don't know	☐	

311	What is your role in Gram Sabha?	
Specify	☐	multiple selection
No response	☐	single selection
Don't know	☐	selection

312	Who all should be mandatorily participate in Gram Sabha?	
President	☐	multiple selection
Vice-president	☐	
Panchayat elected members	☐	
PDO/secretary	☐	
Panchayat committee members	☐	
ASHA worker	☐	
Local school head master	☐	
Local Government officials	☐	
Specify	☐	single selection
No response	☐	
Don't know	☐	

PDO: panchayat development officer; ASHA: accredited social health activist

313	In your experience generally who all participate in your Panchayat's Gram Sabha?	
Villagers within the jurisdiction of Panchayat	☐	multiple selection
Different social groups	☐	
Women	☐	
Backward social groups	☐	
Local elites	☐	
local elders	☐	
Officials from Panchayat and other Government departments	☐	
Specify	☐	
Specify	☐	single selection
No response	☐	
Don't know	☐	

314	What are the issues commonly discussed in your Gram Sabha	
Selection of beneficiaries	☐	multiple
Specify	☐	selection

Specify	☐	
Specify	☐	
Specify	☐	
No response	☐	single
Don't know	☐	selection

316	When the above participants start discussing these issues; for such a discussion to what extent below mentioned statements are applicable												
A	<i>'There is equality in participation'</i> to what extent this statement is applicable												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
B	<i>'Participants have equal opportunity to engage in discussions'</i> to what extent this statement is applicable												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
C	<i>'Participants show respect to each other'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
D	<i>'Participants show respect to opinions other than their own'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
E	<i>'There is rationality for the justifications offered by participants'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
F	<i>'There is common good orientation in opinions'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
G	<i>'Participants make efforts to listen and understand what others are saying and then reply'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
H	<i>'Participants interact with each other'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
I	<i>'Participants make credible alternative proposals for issues under discussion'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
J	<i>'There is active mediation by participants to achieve consensus'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
K	<i>'Participants use story telling or anecdotal experiences to make their point'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐
L	<i>'Participants use coercive methods such as threats in making their point'</i> to what extent this statement is applicable?												
Definitely not applicable	☐	Not applicable	☐	Undecided	☐	Applicable	☐	Definitely applicable	☐	No response	☐	Don't know	☐

316	On the influence of discussions in the meeting on you; to what extent do you agree with these statements												
A	<i>'In the discussion encountered viewpoints different from your own'</i> To what extent do you agree with this?												
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐

B	Discussions made you to think critically about reconsidering/changing your opinion on issues? To what extent do you agree with this?												
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
C	In the meeting, decisions taken collectively by all present was better than those taken by panchayat officials and elected members To what extent do you agree with this?												
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
D	Manner of conduct of Panchayat officials in the meeting increased your trust in them To what extent do you agree with this?												
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐

317	In your opinion, in general what was the manner in which decision were taken in your Panchayat's Gram Sabha											
By Consensus	☐	single selection										
By Majority	☐											
By President	☐											
By powerful/elite members	☐											
By PDO/Secretary	☐											
By higher officials	☐											
By local elites	☐											
Specify	☐											
No response	☐											
Don't know	☐											

318	In your opinion, what problems does Panchayat face for conducting Gram Sabha effectively											
Officials do not attend	☐	multiple selection										
People are not interested in participating	☐											
In fighting among participants	☐											
Afraid of facing questions from people	☐											
Cooperation and coordination problems	☐											
Dissemination in beneficiary selection	☐											
Lack of information among people	☐											
Lack of unity in the community	☐											
lack of transport facilities to attend	☐											
Specify	☐											
No problems	☐	single selection										
No response	☐											
Don't know	☐											

319	In your opinion, why people do not participate in Gram Sabha in large numbers?											
Officials do not attend	☐	multiple selection										
People are not interested in participating	☐											
In fighting among participants	☐											
Afraid of speaking with officials	☐											
Cooperation and coordination problems	☐											
Discrimination in beneficiary selection	☐											
Lack of information among people	☐											
Lack of unity in the community	☐											
lack of transport facilities to attend	☐											
Specify	☐											
No problems	☐	single selection										
No response	☐											
Don't know	☐											

3.3 Participation MGNREGA Gram Sabha

MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act

320	Have you heard of MGNREGA Gram Sabha and participated in it?		
Have not heard about it	☐	Go to 322	
Hear about it but have not participated in it	☐	single selection	
if you have participated, mention how many times in the last three years	☐		
No response	☐		
Don't know	☐		

321	In which month of the year MGNREGA Gram Sabha has to be convened		
Mention the calendar month	☐	single selection	
No response	☐		
Don't know	☐		

3.4 Participation in Samanya Sabha

322	Have you heard of Samanya Sabha and participated in it?		
Have not heard about it	☐	Go to 327	
Hear about it but have not participated in it	☐	single selection	
if you have participated, mention how many times in the last three years	☐		
No response	☐		
Don't know	☐		

323	How many Samanya Sabha has to be held in a year		
How many times	☐	single selection	
No response	☐		
Don't know	☐		

324	Can villagers participate in Samanya Sabha?				
Can they participate	No	☐	Yes	☐	single selection
No response		☐			
Don't know		☐			

325	What is the quorum requirement for holding Samanya Sabha?		
	☐	single selection	
No response	☐		
Don't know	☐		

326	Who are all required to mandatorily participate in Samanya Sabha		
President	☐	multiple selection	
Vice president	☐		
Panchayat elected members	☐		
PDO/Secretary	☐		
Committee members	☐		
ASHA worker	☐		
Local school head master	☐		
Local Government officials	☐		
Villagers	☐		
Specify	☐		
No response	☐	single selection	
Don't know	☐		

3.5 About Panchayat's committees

322	Have you heard of production committee and participated in it?		
Have not heard about it	☐	single selection	
Hear about it but have not participated in it	☐		
if you have participated, mention how many times in the last three years	☐		
No response	☐		
Don't know	☐		

328	Have you heard of civic amenities committee and participated in it?		
Have not heard about it	☐	single selection	
Hear about it but have not participated in it	☐		

if you have participated, mention how many times in the last three years		
No response	☐	
Don't know	☐	

329	Have you heard of social justice and if yes, participated in it?	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years		
No response	☐	
Don't know	☐	

330	Have you heard of food security committee and participated in it?	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years		
No response	☐	
Don't know	☐	

331	Have you heard of school development and monitoring committee and participated in it?	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years		
No response	☐	
Don't know	☐	

3.6 Village Health Sanitation and Nutrition Committee (VHSNC)

332	Have you heard of VHSNC	
Have not heard about it	☐	Go to 341
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years		
No response	☐	
Don't know	☐	

333	Does VHSNC belong to Panchayat or health department?	
Panchayat	☐	single selection
Health department	☐	
No response	☐	
Don't know	☐	

334	Who are the ex-officio members of VHSNC	
President	☐	multiple selection
Local panchayat elected members	☐	
School teachers	☐	
Junior health assistant	☐	
Anganawadi (Child care centre) worker	☐	
Specify		
No response	☐	single selection
Don't know	☐	

335	Where/who selects general members of VHSNC	
Gram Sabha / Ward Sabha	☐	single selection
Samanya Sabha	☐	
President	☐	
Local Panchayat elected members	☐	
PDO/Secretary	☐	
Local MLA/MP	☐	
Local elites	☐	
Health department	☐	
Junior health assistant	☐	
Specify		

No response	☐	
Don't know	☐	

336	About formation of VHSN committee		
How many general members should VHSNC have?	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	
Out of these general members how many should be women	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	
Out of these women members how many should be from scheduled caste and scheduled tribe	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	
Out of the women members how many should be from self-help groups	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	

337	How many VHSNC meetings should be held in a year		
How many	☐	single selection	
No response	☐		
Don't know	☐		

338	Mention 5 important responsibilities of VHSNC		
Preparation of annual village health plan	☐	multiple selection	
Preparation of annual village health report	☐		
Specify	☐		
Specify	☐		
No response	☐	single selection	
Don't know	☐		

339	As per rules, what is the annual untied fund VHSNC is eligible for		
How much	☐	single selection	
No response	☐		
Don't know	☐		

340	What are the five main purposes for which this untied fund can be used for?		
Specify	☐	multiple selection	
Specify			
Specify			
Specify			
Specify			
No response	☐	single selection	
Don't know	☐		

3.7 Awareness on Village Water and Sanitation Committee (VWSC)

341	Have you heard of VWSC		
Have not heard about it	☐	Go to 401	
Hear about it but have not participated in it	☐		
if you have participated, mention how many times in the last three years	☐		
No response	☐		
Don't know	☐		

342	About formation of VWSC committee		
How many general members should VWSC have?	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	
Out of these general members how many should be women	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	

Out of these women members how many should be from scheduled caste and scheduled tribe	Not applicable	☐	single selection
	No response	☐	
	Don't know	☐	

343	What are the five main responsibilities		
	Monitor the work of watermen and bill collector	☐	
	Manage the collection of water tax as per rules	☐	
	Advise Panchayat on revision of water tax	☐	
	Specify	☐	
	Specify	☐	
	No response	☐	
	Don't know	☐	

Section 4: On Panchayat facilities related water and sanitation

4.1 Services related to water and sanitation

401	What are the households eligible for getting water taps		
	Only BPL households	☐	multiple selection
	Only SC/ST households	☐	
	As decided in the Gram Sabha /Ward Sabha	☐	
	As decided by the president	☐	
	Depends on schemes	☐	
	Specify	☐	
	All households	☐	single selection
	No response	☐	
	Don't know	☐	

402	As per rules which households are eligible to get toilets from Panchayat?		
	Only BPL households	☐	
	Only SC/ST households	☐	
	As decided in the Gram Sabha /Ward Sabha	☐	
	As decided by the president	☐	
	Depends on schemes	☐	
	Specify	☐	
	All households	☐	
	No response	☐	
	Don't know	☐	

403	what documents are needed to get household water taps or toilets from Panchayat		
	Birth certificate	☐	multiple selection
	Caste certificate	☐	
	Income certificate	☐	
	Ration card	☐	
	House related record	☐	
	Aadhar card	☐	
	Specify	☐	single selection
	No response	☐	
	Don't know	☐	

404	To get household water tap or toilet from Panchayat, which is the most suitable option to submit the application		
	Gram Sabha / Ward Sabha	☐	single selection
	Samanya Sabha	☐	
	President	☐	
	Local Panchayat elected members	☐	
	Panchayat Office (PDO/Secretary)	☐	
	Local MLA/MP	☐	
	Local elites	☐	
	VHSNC/VWSC	☐	

Specify	☐	
No response	☐	
Don't know	☐	

405	Where/who selects the beneficiaries to receive household water taps or toilets from Panchayat	
Gram Sabha / Ward Sabha	☐	single selection
Samanya Sabha	☐	
President	☐	
Local Panchayat elected members	☐	
Panchayat Office (PDO/Secretary)	☐	
Local MLA/MP	☐	
Local elites	☐	
VHSNC/VWSC	☐	
Local MLA	☐	
Specify	☐	
No response	☐	
Don't know	☐	

406	How much financial assistance is available from panchayat for household toilets	
How much	☐	single selection
No response	☐	
Don't know	☐	

407	How much tax should be paid to Panchayat every month for household tap facility	
How much	☐	single selection
Is not applicable to this Panchayat	☐	
No response	☐	
Don't know	☐	

408	How much tax should be paid to Panchayat every month for public water taps	
How much	☐	
Not applicable for this Panchayat	☐	
No response	☐	
Don't know	☐	

409	among those mentioned below which is he most suitable reason why Panchayat collects water tax	
To manage the water supply system	☐	single selection
For developmental activities in the village	☐	
Pressure from Government	☐	
bound by the law	☐	
Specify	☐	
No response	☐	
Don't know	☐	

410	In your opinion, what is the most important reason why people don't pay water tax regularly	
High tax rate	☐	single selection
Nobody comes to collect the tax	☐	
Did not know that it has to be paid	☐	
Poor quality of water supply service	☐	
Was informed that there was no need to pay	☐	
Specify	☐	
No response	☐	
Don't know	☐	

411	Whose primary responsibility it is to manage the garbage bin in your street	
Panchayat	☐	single selection
VHSNC/VWSC	☐	
Local residents	☐	
Health department	☐	

Specify	☐	
No response	☐	
Don't know	☐	

412	Which is the most suitable place to submit grievance redressal application related water supply by Panchayat	
Gram Sabha / Ward Sabha	☐	single selection
Samanya Sabha	☐	
President	☐	
Local Panchayat elected members	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/MP	☐	
Local elites	☐	
VHSNC/VWSC	☐	
Waterman	☐	
Specify	☐	
No response	☐	
Don't know	☐	

4.2 On water and sanitation facilities to be provided by the Panchayat in public spaces

413	To decide on the location of public taps which is the most suitable option	
Gram Sabha / Ward Sabha	☐	
Samanya Sabha	☐	
President	☐	
Local Panchayat elected members	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/MP	☐	
Local elites	☐	
Depending on the need	☐	
VHSNC/VWSC	☐	
Specify	☐	
No response	☐	
Don't know	☐	

414	If there is a need for supply of water or toilet to your local school or child care centre, which is the most suitable place to give application for it	
Gram Sabha / Ward Sabha	☐	
Samanya Sabha	☐	
President	☐	
Local Panchayat elected members	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/MP	☐	
Local elites	☐	
Block Panchayat	☐	
VHSNC/VWSC	☐	
SDMC/Bala Vikasa committee	☐	
Specify	☐	
No response	☐	
Don't know	☐	

415	Who is responsible for daily management of water supply arrangement and toilets in your local school or child care centre	
Panchayat	☐	single selection
VHSNC/VWSC	☐	
Local residents	☐	
Education/health department	☐	

School/child care centre staff	☐	
SDM committee/bala vikas committee	☐	
Specify	☐	
No response	☐	
Don't know	☐	

416	Who is responsible for daily management of garbage bin of your local school or child care centre	
Panchayat	☐	single selection
VHSNC/VWSC	☐	
Local residents	☐	
Education/health department	☐	
School/child care centre staff	☐	
SDM committee/bala vikas committee	☐	
Specify	☐	
No response	☐	
Don't know	☐	

417	If there is problem in daily management of garbage bins in your local school/child care centre who/which is the most suitable to discuss it with	
Gram Sabha / Ward Sabha	☐	
Samanya Sabha	☐	
President	☐	
Local Panchayat elected members	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/MP/TP/ZP Members	☐	
local elites	☐	
VHSNC/VWSC	☐	
SDM Committee/bala vikasa committee	☐	
Specify	☐	
No response	☐	
Don't know	☐	

4.3 On facilities provided by ASHA worker

418	Who/where ASHA worker is selected	
Gram Sabha / Ward Sabha	☐	single selection
Samanya Sabha	☐	
President	☐	
local Panchayat elected member	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/TP/ZP/MP members	☐	
local elites	☐	
Health department / Primary health centre (PHC) doctor	☐	
Junior health assistant	☐	
Specify	☐	
No response	☐	
Don't know	☐	

419	What is the minimum qualification required to be eligible for selection for ASHA worker	
Minion in number the standard	☐	single selection
No response	☐	
Don't know	☐	

420	What are the important services given by ASHA worker to pregnant and lactating mothers	
Accompany pregnant women to local health centre	☐	multiple selection
Provide health education	☐	
Provide Iron and Folic Acid (IFA) pills	☐	
Accompany pregnant women to local health centre to get them examined	☐	
Be with them during delivery of baby	☐	

Multiple visits to check health of mother and baby in the first month after delivery	☐	single selection
Accompany child for immunisation	☐	
Specify	☐	
Specify	☐	
No response	☐	
Don't know	☐	
421	if there is problem or dissatisfaction with services provided by ASHA worker which is the most suitable options of the ones given below to discuss it	
Gram Sabha / Ward Sabha	☐	single selection
Samanya Sabha	☐	
President	☐	
local Panchayat elected member	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/TP/ZP/MP members	☐	
local elites	☐	
Health department	☐	
VHSNC/VWSC	☐	
Specify	☐	
No response	☐	
Don't know	☐	

Section 5: on processes to improve transparency and responsiveness in Panchayat's functioning

5.1 Jama bandhi social audit and sakala

501	Have you heard about MGNREGA social audit and if yes, participated in it	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years	☐	
No response	☐	
Don't know	☐	
502	Have you heard about jama bandhi social audit and if yes, participated in it	
Have not heard about it	☐	single selection
Hear about it but have not participated in it	☐	
if you have participated, mention how many times in the last three years	☐	
No response	☐	
Don't know	☐	
503	Who formulates the jama social audit bandhi team	
Gram Sabha / Ward Sabha	☐	single selection
Samanya Sabha	☐	
President	☐	
local Panchayat elected member	☐	
Panchayat office (PDO/Secretary)	☐	
Local MLA/TP/ZP/MP members	☐	
local elites	☐	
Block Panchayat executive officer	☐	
District Panchayat executive officer	☐	
Specify	☐	
No response	☐	
Don't know	☐	
504	In which period of the year should jama bandhi audit be conducted	
Period starting from:		single selection
Period ending on:		
No response	☐	

Don't know		☐	
505	Who are all mandatorily required to attend the jama bandhi audit		
All elected members of Panchayat		☐	multiple selection
President		☐	
Vice president		☐	
All staff of Panchayat		☐	
Junior assistant engineer		☐	
Specify		☐	
Specify		☐	single selection
No response		☐	
Don't know		☐	
506	What is the purpose of conducting jama bandhi audit		
Evaluation of Panchayat's activities		☐	multiple selection
Scrutinise related documents, registers and accounts		☐	
transparency in administration		☐	
Specify		☐	
Specify		☐	
Specify		☐	
No response		☐	single selection
Don't know		☐	
507	Have you heard of right to information act and have you used its provision		
Have not heard about it		☐	go to 509
Hear about it but have not used it		☐	
if you have participated, mention how many times in the last three years		☐	
No response		☐	
Don't know		☐	
508	what are the areas under which it is not possible to get information using right to information act		
Specify		☐	multiple selection
Specify		☐	
Specify		☐	
No response		☐	single selection
Don't know		☐	
509	Have you heard of sakala and have used its provisions		
Have not heard about it		☐	go to 601
Heard about it but have not used it		☐	single selection
if you have participated, mention how many times in the last three years		☐	
No response		☐	
Don't know		☐	
510	In the Panchayat system who are responsible for providing services under sakala		
Who is the designated person	No response	☐	single selection
	Don't know	☐	
	Who is the competent authority	No response	☐
Don't know		☐	
Who is the appellate authority		No response	☐
	Don't know	☐	
	511	As per the provisions under sakala for the below mentioned services what is the time limit to respond to the application from people	
Maintenance of drinking water supply – minor repairs	No response	☐	single selection
	Don't know	☐	

Maintenance of street lights – minor repairs			single selection
	No response	☐	
	Don't know	☐	
Maintenance of village sanitation			single selection
	No response	☐	
	Don't know	☐	

Section 6: Overall management of Panchayat activities

601	Up till now we have discussed about Panchayat's meetings, committees, responsibilities and activities. When you think about overall management of all these responsibilities and activities to what extent you agree with following statements												
A You consider yourself well qualified to participate in affairs of Panchayat													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
B You can do as good a job in managing affairs of Panchayat as most others													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
C You feel you have a pretty good understanding of the important issues facing the Panchayat													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
D You feel you are well informed about affairs of Panchayat than most others													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
E Sometimes affairs of Panchayat seem so complicated that a person like you can't really understand what's going on													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
F People like you don't have any say about what Panchayat does													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
G Panchayat elected members and officials do not care what people like you think													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
H Panchayat elected members are only interested in people's votes and their own personal gains													
Strongly disagree	☐	Agree	☐	Undecided	☐	Agree	☐	Strongly agree	☐	No response	☐	Don't know	☐
602	In your opinion, do you feel when Panchayat elected members and officials take community related decisions, they do not consider opinions of local people												
Strongly disagree										☐	single selection		
Disagree										☐			
Undecided										☐			
Agree										☐			
Strongly disagree										☐			
No response										☐			
Don't know										☐			

Section 7: Community in the panchayat area and the relationship with it

701	How many villages come under the jurisdiction of this Panchayat		
Number of revenue villages			Mention in numbers
Number of hamlets			
No response		☐	
Don't know		☐	

702	Are you in general familiar with these villages under Panchayat jurisdiction and do you have links with them										
No									☐	single selection	
Yes									☐		
No response									☐		
Don't know									☐		
703	Mention the various social groups residing in these villages within the Panchayat jurisdiction										
Specify									☐		
No response									☐		
Don't know									☐		
704	Mention the festivals, fairs and functions celebrated by these social groups in a shared manner										
Specify									☐		
Specify									☐		
No response									☐		
Don't know									☐		
705	Are there any differences in this community residing within the Panchayat jurisdiction										
Specify									☐		
Specify									☐		
No response									☐		
Don't know									☐		
706	How important to you the relationship with this community within the Panchayat jurisdiction										
Prefer not be a part of this community									☐	single selection	
Not important at all									☐		
Not very important									☐		
somewhat important									☐		
important									☐		
Very important									☐		
No response									☐		
Don't know									☐		
707	As we have discussed till now; when we think of villagers of different social groups in all the villages within this Panchayat's jurisdiction as one community; to what extent the following statements reflect your feelings about this community										
B	you get your important needs met because you are a part of this Panchayat jurisdiction community										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
B	Members of this Panchayat jurisdiction community and you value the same things										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
C	This Panchayat jurisdiction community has been successful in getting the needs of its members met										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
D	Being a member of this Panchayat jurisdiction community makes you feel good										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
E	When you have a problem, you can talk about it with members of this Panchayat jurisdiction community.										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
F	People in this Panchayat jurisdiction community have similar needs, priorities, and goals.										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
G	You can trust people in this Panchayat jurisdiction community										

Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
H	You can recognize most of the members of this community										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
I	Most of the Panchayat jurisdiction community members know me										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
J	You put a lot of time and effort into being part of this Panchayat jurisdiction community										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
H	Being a member of this community is a part of your identity.										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
I	You care about what other members of this Panchayat jurisdiction community think about you										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
J	You have influence over what this Panchayat jurisdiction community is like										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
K	If there is a problem in this Panchayat jurisdiction community, members can get it solved										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
L	Members of this Panchayat jurisdiction community care about each other.										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
M	This Panchayat jurisdiction community has good leaders										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
N	It is very important to you to be a part of this Panchayat jurisdiction community										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
O	Members of this Panchayat jurisdiction community have shared important events together, such as fairs, festivals and problems										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐
P	You feel hopeful about the future of this community										
Not at all	☐	Somewhat	☐	Mostly	☐	Completely	☐	No response	☐	Don't know	☐

Section 8: participation in elections, associations and community programs

801	Have you voted in the recently held following elections					
National elections (2009)	☐	☐	☐	☐	☐	single selection
State elections (2013)	☐	☐	☐	☐	☐	single selection
Gram Panchayat election (2010)	☐	☐	☐	☐	☐	single selection
Block Panchayat election	☐	☐	☐	☐	☐	single selection
District Panchayat election	☐	☐	☐	☐	☐	single selection
associational/institutional elections	☐	☐	☐	☐	☐	single selection
Specify	☐	☐	☐	☐	☐	single selection

802	In the last three years, have you canvassed in any elections			
No				☐
If yes, how many elections				☐
No response				☐
Don't know				☐
single selection				

803	In your family including yourself; till now how many members have contested in elections			
	Respondent	family member		
Gram Panchayat			Mention in number. If not contested mention as '0'	
District Panchayat				
National elections				
Block Panchayat				
State election				
associational/institutional election				
Specify				
No response	☐	☐	single selection	
Don't know	☐	☐		

804	In your family including yourself; till now how many are members of Panchayat statutory and functional committees			
	Respondent	Family member		
Social justice committee				
Production committee				
Civic amenities committee				
Village health sanitation and nutrition committee				
Village water and sanitation committee				
Food security committee				
School development and monitoring committee				
Village forest committee				
Specify				
No response	☐	☐		
Don't know	☐	☐		

805	In your family including yourself; how many members are active in following associations				
	Respondent		Family members		
	member	committee member	member	committee member	
Youth associations					
Farmers associations					
VSSNS					
Traders associations					
Religious associations					
Self-help groups					
Caste associations					
Voluntary organisations					
Milk producers union					
Specify					
No response	☐	☐	☐	☐	single selection
Don't know	☐	☐	☐	☐	

806	In the last one year, including yourself how many members of your family have participated in meetings of above associations or community programs			
Associations				
Community programs				
Specify				
No response	☐	☐	single selection	
Don't know	☐	☐		

807	in the last three years, in how many training programs your family members including yourself have participated		
Not participated	☐	☐	single selection
If participated, in how many			
No response	☐	☐	
Don't know	☐	☐	
808	What are the various sources you use to know about happenings/news in your surroundings and in your state		
Friends and neighbours	☐		multiple selection
News papers	☐		
TV/Radio	☐		
Through staff and programs of associations	☐		
Gram Sabha / Ward Sabha	☐		
Panchayat elected members / officials	☐		
family members	☐		
local elites	☐		
Specify	☐		
No response	☐		
Don't know	☐		

Section 9: on Family and household matters

901	Type of roof of the house		
RCC	☐		single selection
Sheet	☐		
Tiles	☐		
Thatch	☐		
Specify	☐		
No response	☐		
902	Ownership of your house		
Own	☐		single selection
Lease	☐		
Rented	☐		
Specify	☐		
No response	☐		
903	How many members does your household has		
Less than 6 years	☐		
More than 6 years	☐		
No response	☐		
904	Up to what level members of your household have been educated		
Illiterate	☐		
Literate	☐		
Primary school	☐		
Middle school	☐		
High school	☐		
PUC	☐		
Degree and above	☐		
Polytechnic / JOC	☐		
Specify	☐		
No response	☐		
905	Does your household has following facilities		
Electricity	☐		
Panchayat toilet	☐		

Self-funded toilet	☐	
Panchayat water tap	☐	
self-created water tap	☐	
Radio	☐	
Tape recorder	☐	
Cooking Gas	☐	
Refrigerator	☐	
Television	☐	
Washing machine	☐	
Computer	☐	
Cycle	☐	
Two wheeler	☐	
Four wheeler	☐	
Tractor	☐	
Water tank	☐	
Mobile phones	☐	
Specify	☐	
None of the above	☐	
No response	☐	

906	How many acres of land do you own	
Irrigated	☐	Mention the units used: acres /gunte/cents
Rain fed	☐	
Horticulture crops	☐	
Arid	☐	
Do not have lands	☐	single selection
No response	☐	
Don't know	☐	

907	What is your main source of income based on amount	
Agriculture	☐	single selection
Daily wage labour	☐	
Trading/self-employed	☐	
Employment: Government	☐	
Employment: private	☐	
Pension	☐	
Honorarium	☐	
Specify	☐	
No response	☐	

908	What type of ration card do you have	
BPL	☐	single selection
APL	☐	
Antyodaya	☐	
Do not have any cards	☐	
No response	☐	

We have come to the end of this questionnaire. We are grateful to you for your time. Your opinions are very important to this research. Thank you!

A.3.3 Village Mapping Questionnaire

Section 1: Display of information about Panchayat's activities in public places

1.1 Display of information about Panchayat's activities in public spaces

101	Details of display of information on Panchayat's activities and other useful issues in public places											
Information on	not display ed	Displayed and updated						Displayed and legible				N ot e
Sakala	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
MGNREGA Scheme	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Panchayat committees	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Right to Information Act	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Annual income and expenses	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Annual work plan	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Housing beneficiaries list	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Public distribution system	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Citizen charter	☐	No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	
Specify		No ⁰	☐	Yes ¹	☐	NA ⁻⁹⁶	☐	No ⁰	☐	Yes ¹	☐	

Section 2: Assessing available water and sanitation facilities

Section 2.1: Mapping availability of facilities in different areas of the village

201	Information on different areas of the village and on the community living in those areas									
	Area 1		Area 2		Area 3		Area 4		Note	
Name of the area										
Distance form village centre									estimate	
Number of Panchayat elected members: living/having links with										
Does President live here / has links		☐		☐		☐		☐		
		☐		☐		☐		☐		
Does Vice-president live here / has links		☐		☐		☐		☐		
		☐		☐		☐		☐		
Does influential people live here / has links (teachers, wealthy people, current/retired politicians, Government employees, leaders)		☐		☐		☐		☐		
		☐		☐		☐		☐		
Does head of the village live here		☐		☐		☐		☐		
		☐		☐		☐		☐		
Total number of households										
Most common caste of the people ^A										
Most common roof type of the houses ^B										
Most common source of livelihood ^C										
Type of main road ^D										
Houses having Panchayat water taps										
Houses having Panchayat toilets										

A: 1: Scheduled caste; 2: Scheduled tribe; 3: OBC; 4: Higher caste; 5: Others

B: 1: Thatch; 2: Tiles; 3: Sheet; 4: RCC; 5: Stone slab

C: 1: Agriculture/farming; 2: Daily wage labour; 3: Trading/self-employed; 4: Employment – Government; 5: Employment – private; 6: Others

D: 1: Mud road; 2: Asphalted road; 3: cement road; 4: metalled road

202	In the above areas drinking water facilities provided by the Panchayat: their availability, usability and cleanliness							
Area	Total	how many has platform	How many has leach pits	How many working	Maintenance of those working			Note
					Bad	Satisfactory	Good	
Hand pump								
Area 1								
Area 2								
Area 3								
Area 4								
Public taps								
Area 1								
Area 2								
Area 3								
Area 4								
Public open wells								
Area 1								
Area 2								
Area 3								
Area 4								
Others: Specify								
Area 1								
Area 2								
Area 3								
Area 4								

Good: 1. Hand pump is in good condition and is easy to pump water. 2. Platform around the hand pump is in good condition. 3. There is facility for water to flow to the drain. 4. Or it has leach pits which is in good condition

Satisfactory: 1. It is somewhat difficult to pump out water. 2. Platform around the hand pump is need of repairs. 3. Drain is clogged. 4. Or Leach pit is present but not properly maintained

Bad: 1. It is very difficult to pump out water. 2. There is no platform around the hand pump. 3. There is no drain for water to flow out nor is there leach pit. 4. There is dirty stagnating water around the hand pump

203	Maintenance of public water storage tanks by the Panchayat							
Area	How many	how many working	Their capacity	Number of times cleaned in last 6 months	Method of cleaning			Note
					Bleach	Chlorine	Others	
Mini water supply tank								
Area 1			NA					
Area 2			NA					
Area 3			NA					
Area 4			NA					
Overhead tank								
Total								

204	Public sanitation and hygiene: facilities provided by the Panchayat and their maintenance								
	Cement/stone slab drain		Garbage bins		Individual road side garbage dumps	Number stagnant puddles	Street lights (in number)		Notes
	Total length in metres	How much is clogged	How many	How many overflowing			How many	how many working	
Area 1									
Area 2									
Area 3									

Area 4								
205	Garbage management facilities at the village level							
	designated area	management unit	Composting facility	Others	Note			
No facilities available	☐							
How many								
Frequency of cleaning in days								
cleanliness surrounding area ^A								

A: 1: Bad; 2. Satisfactory; 3. Good

2.2 Provision and management of water and sanitation facilities by the Panchayat in the Anganawadi (child care centre)

Note: If there are more than one centre in the village, choose the centre which has the highest enrolment of children

206	Location of Anganawadi and the number of registered children		
Name of the Anganawadi			
Area in which Anganawadi located			
Total number of sanctioned staff			
Total number of staff positions vacant			
2010-11			
Total number of children			
Number of children with Grade 3 (yellow) malnutrition			
Number of children with Grade 4 (red) malnutrition			
2012-13			
Total number of children			
Number of children with Grade 3 (yellow) malnutrition			
Number of children with Grade 4 (red) malnutrition			

207	Sanitation related facilities provided by the Panchayat in the Anganawadi							
	How many	How many By Panchayat		water facilities by Panchayat		How many working	How many being used	notes
		How many	In which year	How many	In which year			
Toilets								If none go to 209
Urinals								
Other facilities								

208	Is the provision of water supply to the toilets adequate							
In general	NA	☐	No	☐	Yes	☐		
In summer months (April-May)	NA	☐	No	☐	Yes	☐		

209	Drinking water facilities in Anganawadi :Availability and usability											
	How many and at what distance				How many working	How many has platforms			How many has leach pits			Overall management
Facilities	Total	Distance	Panchayat	Which year		Total	Panchayat	Which year	Total	Panchayat	Which year	
Hand pump												
Tap												
Open well												
Others												

Panchayat : How many are provided by the Panchayat

Distance: mention in metres

Tap: in own premises or public tap

Management:

Good: 1. Hand pump is in good condition and is easy to pump water. 2. Platform around the hand pump is in good condition. 3. There is facility for water to flow to the drain. 4. Or it has leach pits which is in good condition

Satisfactory: 1. It is somewhat difficult to pump out water. 2. Platform around the hand pump is need of repairs. 3. drain is clogged. 4. Or Leach pit is present but not properly maintained

Bad: 1. It is very difficult to pump out water. 2. There is no platform around the hand pump. 3. There is no drain for water to flow out nor is there leach pit. 4. There is dirty stagnating water around the hand pump

210	Does Anganawadi has adequate drinking water facilities					
In general	No	☐	Yes	☐		
In summer months (April-May)	No	☐	Yes	☐		

211	Facilities to manage garbage/solid waste in the Anganawadi					
	Garbage bin	garbage pit	compost pit	others	notes	
No facilities present	☐					Go to 212
How many						
How many provided by the Panchayat						
When was it provided by the Panchayat						
Who manages garbage disposal						
Once in how many days it is done						
How is the cleanliness around the facility ^B						

A: 1: by Panchayat; 2: by Anganawadi staff; 3: others;. B: 1: Bad; 2: Satisfactory; 3: Good

2.3 water and sanitation facilities in the health sub centre: availability and management

Note: if there is more than one sub centre, choose the one which has the highest number of staff

212	Location of the sub centre and the number of sanctioned staff					
Sub centre	Yes	☐	No	☐	If No, go to 218	
Has its own building	Yes	☐	No	☐	If No, go to 218	
Name of the sub centre						
Area in which sub centre is located						
Total number of sanctioned staff						
Total number of staff positions vacant						

213	Sanitation related facilities provided by the Panchayat in the Sub centre							
	How many	How many by Panchayat		Water facilities by Panchayat		How many working	How many being used	notes
		How many	In which year	How many	In which year			
Toilets								If none go to 214
Urinals								
Other facilities								

214	Is the provision of water supply to the toilets adequate							
In general	NA	☐	No	☐	Yes	☐		
In summer months (April-May)	NA	☐	No	☐	Yes	☐		

215	Drinking water facilities in Sub centre :Availability and usability											
	How many and at what distance				How many working	How many has platforms			How many has leach pits			Overall management
Facilities	Total	Distance	Panchayat	Which year		Total	Panchayat	Which year	Total	Panchayat	Which year	
Hand pump												
Tap												

Open well												
Others												

Panchayat : How many are provided by the Panchayat

Distance: mention in metres

Tap: in own premises or public tap

Management:

Good: 1. Hand pump is in good condition and is easy to pump water. 2. Platform around the hand pump is in good condition. 3. There is facility for water to flow to the drain. 4. Or it has leach pits which is in good condition

Satisfactory: 1. It is somewhat difficult to pump out water. 2. Platform around the hand pump is need of repairs. 3. drain is clogged. 4. Or Leach pit is present but not properly maintained

Bad: 1. It is very difficult to pump out water. 2. There is no platform around the hand pump. 3. There is no drain for water to flow out nor is there leach pit. 4. There is dirty stagnating water around the hand pump

216	Does Sub centre has adequate drinking water facilities											
In general							No	☐	Yes	☐		
In summer months (April-May)							No	☐	Yes	☐		

217	Facilities to manage garbage/solid waste in the Sub centre					
	Garbage bin	garbage pit	compost pit	others	notes	
No facilities present	☐				Go to 212	
How many						
How many provided by the Panchayat						
When was it provided by the Panchayat						
Who manages garbage disposal						
Once in how many days it is done						
How is the cleanliness around the facility ^B						

A: 1: by Panchayat; 2: by Anganawadi staff. B: 1: Bad; 2: Satisfactory; 3: Good

2.4 Water and sanitation facilities in the School: Availability and their management

Note: If there are more than one Government school in the village, choose the higher primary school with highest enrolment of children

218	Location of the school and the number of enrolled children											
Name of the school												
Area in which school is located												
Total number of days												
Total number of girls												
Total number of standards (example: 1 st to 7 th standard)												

219	Sanitation related facilities provided by the Panchayat in the School											
		How many by Panchayat		Water facilities by Panchayat		How many working		How many being used		notes		
	How many	How many	In which year	How many	In which year							
Toilets: Boys												
Urinals: Boys												
Toilets: Girls												
Urinals: Girls												
Other facilities												

220	Is the provision of water supply to the toilets adequate											
In general							NA	☐	No	☐	Yes	☐
In summer months (April-May)							NA	☐	No	☐	Yes	☐

221	Drinking water facilities in School: Availability and usability											
Facilities	How many and at what distance			How many	How many has platforms			How many has leach pits			Overall manag	

	Total	Distance	Panchayat	Which year	working	Total	Panchayat	Which year	Total	Panchayat	Which year	ement
Hand pump												
Tap												
Open well												
Others												

Panchayat : How many are provided by the Panchayat

Distance: mention in metres

Tap: in own premises or public tap

Management:

Good: 1. Hand pump is in good condition and is easy to pump water. 2. Platform around the hand pump is in good condition. 3. There is facility for water to flow to the drain. 4. Or it has leach pits which is in good condition

Satisfactory: 1. It is somewhat difficult to pump out water. 2. Platform around the hand pump is need of repairs. 3. drain is clogged. 4. Or Leach pit is present but not properly maintained

Bad: 1. It is very difficult to pump out water. 2. There is no platform around the hand pump. 3. There is no drain for water to flow out nor is there leach pit. 4. There is dirty stagnating water around the hand pump

222	Does school has adequate drinking water facilities					
In general	No	☐	Yes	☐		
In summer months (April-May)	No	☐	Yes	☐		

223	Facilities to manage garbage/solid waste in the school					
	Garbage bin	garbage pit	compost pit	others	notes	
No facilities present	☐					Go to 212
How many						
How many provided by the Panchayat						
When was it provided by the Panchayat						
Who manages garbage disposal						
Once in how many days it is done						
How is the cleanliness around the facility ^B						

A: 1: by Panchayat; 2: by Anganawadi staff. B: 1: Bad; 2: Satisfactory; 3: Good

A.4 ALGORITHM USED IN FACTOR ANALYSIS

