Can Community Participation Improve School Quality?
An Evaluation of a Schooling Program in India.

Final Report

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by

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1. Introduction

In June 2009, the Non-government Organization Prajayatna, with funding from the William and Flora Hewlett Foundation, initiated a program to improve schooling outcomes in rural Karnataka, a state in south India. Prajayatna sought to accomplish this primarily by strengthening School Development and Management Committees (SDMCs) and so empowering the community to achieve greater control over primary schools. The project also worked to strengthen school networks at the level of the village government (Gram Panchayat), and Cluster Resource Centers (CRCs), government institutions charged with the responsibility of monitoring the schools that fall under their jurisdiction and overseeing monthly teacher training. The CRC program commenced in the 2011-12 school year. This report presents results from the evaluation of these interventions, and complements several academic papers that provide a more rigorous analysis of the main results. Since the project focused on strengthening SDMCs, we start this report with a brief description of school management committees in Karnataka.[1] We follow this with a description of the project, and then present results from the evaluation study.

2. School management committees and schools in the survey area

While India has advocated decentralized control over local public goods including schools since the early 1990s, formal recognition of the role of school management committees came with the Right to Education Act (RTE), enacted in August 2009, and in force since April 2010. The Act requires every school to have a school management committee comprising elected parent representatives as well as members of the school administration and the local community. SDMCs are responsible for monitoring the functioning of the school (including teachers), preparing and recommending a school development plan and overseeing its implementation, and monitoring the utilization of grants received by the school. They also serve as the bridge between the school and the community, with their responsibilities including promoting the involvement of parents in schools and ensuring student enrollment and attendance. The RTE Act requires SDMCs to meet monthly and to organize a meeting with parents and teachers once every

[1] Details of the educational system in the state of Karnataka are included in the baseline report for the study (Kochar et al 2011), and are not repeated here.

three months. This meeting provides a forum for teachers to provide information to parents on the academic status of their child and on his or her progress in learning.

School management committees in the study state of Karnataka pre-date the Right to Education Act. In 2001, the state set up a Task Force on School Education to evaluate measures necessary to enhance learning in schools. The Task Force[2] advocated the formation of SDMCs as a means of involving communities in schools. Accordingly, in 2001, the state Government issued an executive order requiring all schools to set up SDMCs comprising elected parents and nominated members from the community.

This order was, however, almost immediately mired in controversy over the constitution of the committee (Centre for Child and The Law 2011). Members of the State Legislative Assembly demanded the right to nominate the chairperson. While the State Government initially acceded to this request, it triggered a public outcry that eventually resulted in a new set of Bye Laws in 2006 (The Karnataka Gram Panchayat's School Development and Monitoring Committees Model Bye Laws of 2006). Under these, each SDMC must include 9 elected parent members, four ex-officio members and 6 members nominated from the local community. The 2006 byelaws restored elections (including that of the President) and brought SDMCs under the jurisdiction of the village government, the Gram Panchayat. The regulations dictated that the tenure of an SDMC should be 3 years. However, at the same time, the rules also stipulated that the tenure of a SDMC should be co-terminus with that of the village Government. Since the term of the village government is 5 years, there is little uniformity in election cycles across schools in the state, and a considerable amount of variation both in election years and in the term of SDMCs.

Other than SDMCs and, through them, village governments, a parallel structure exists at the "cluster" level for monitoring schools, and for the training of teachers. Cluster Resource Centers (CRCs), and the associated Cluster Resource Person (CRP) are responsible for approximately 15 schools, located in surrounding villages. The CRP is responsible for arranging cluster-level training of teachers, visiting schools on a regular basis, verifying teacher attendance and ensuring learning standards in the schools under his or her jurisdiction.

[2] This was the Raja Ramanna Committee on Quality Improvement of Elementary Education.

3. The Project and Implementation

3.1 The project

The project's primary objective was to strengthen local institutions involved in schooling, and hence empower communities to take ownership of their schools. It was premised on the belief that greater community control over schools and improvements in the quality of local institutions would enhance learning outcomes for children.

The implementation of the project was designed keeping in mind the need for a rigorous evaluation. The clusters identified for the project, located in 11 districts of the state, were divided into four randomly selected samples. No program activities were conducted in one of these, allowing it to serve as a control. The remaining three samples featured programs that differed in content and intensity, so as to enable an evaluation of different components of Prajayatna's approach through a comparison of mean outcomes in treatment samples relative to control.

The first treatment arm, T1, represented the strongest intervention. In this sample, Prajayatna initiated the process of institutional strengthening through the development of a data base that provided information at the school level on learning standards in the school, enrollment, absenteeism and drop out, as well as information on school level resources including teachers, learning material and available infrastructure.[3] This data set, called the Local Education Governance Data (LEGD), was developed for all schools and was the basis for school improvement plans at different levels. Following the collection of this data, Prajayatna initiated an introductory village level meeting, called the *Shikshana Gram Sabha.* This meeting was held in most schools in the 2009-10 school year, and was attended by members of the school management committee, parents, community members such as members of different women's organizations, and other local officials (including members of the village government). Members of Prajayatna used the LEGD data for the school

[3] While schools and higher-level institutions do collect this data, it is available only in separate registers; there is no consolidated report available on these outcomes which could provide a readily available snapshot of the quality of schools and learning levels.

in the form of a report card to provide information to community members on the status of the school in terms of infrastructure, available learning materials and resources, student absenteeism and dropout rates. This data was authenticated during the meeting, with this exercise serving as a starting point for a discussion of schooling issues in the community, the need to develop an annual school plan, the process of doing so, and how parents could be involved in the school. Led by Prajayatna volunteers, the meeting also discussed learning, state-stipulated standards, how parents could stay informed about their child's learning progress and what they could do to support it. Concrete steps were suggested, such as the development and maintenance of classroom folders, accessible to all parents, providing information on the progress of each child. Community members were encouraged to take responsibility for maintaining folders and for initiating other improvements such as the formation of "reading spaces" and libraries within schools.

Following this village level informational meeting, Prajayatna attempted to ensure that the monthly meetings required of SDMCs were, indeed, held. During these meetings, Prajayatna worked with SDMC members to improve their managerial capability and help them be effective partners with schools so as to ensure student learning. In working to improve capacity, Prajayatna helped SDMC members develop a school plan and then break it into monthly targets. The monthly meetings served to keep track of progress while simultaneously training members to undertake planning exercises and fulfil their monitoring and reviewing responsibilities.

To ensure learning and enhance the accountability of teachers to the community, Prajayatna provided all teachers in this sample with an "accountability tool" that tracked student performance in each grade. Teachers were required to present this tool to SDMC members in the monthly meetings, so that the community would be well informed of progress in learning. If there was evidence of a sustained failure to improve, Prajayatna facilitated a discussion on possible impediments and steps that could be taken to improve the situation.

In addition to working with school-level management committees, Prajayatna also facilitated "network" meetings once every three months at the level of the Gram Panchayat (village government) featuring participation of members of the village government's Civic Amenities Committee as well as all SDMCs that came under the jurisdiction of the village government. All school

plans were reviewed in this meeting to assess the need for action by the Gram Panchayat. Based on this discussion Prajayatna helped develop a Gram Panchayat Education Plan. Subsequent network meetings were intended to monitor the implementation of school plans.

In a simpler treatment arm (T2) Prajayatna only undertook the village level information meeting and the preparation of a school report card, as well as the village government network meeting. Since the RTE Act requires both monthly SDMC meetings as well as Gram Panchayat (GP) level quarterly network meetings, in principle schools in this sample should have the same number of meetings as T1 schools. Prajayatna's T1 program added value in that its objective was to ensure that meetings were held and to use these meetings to provide management training to SDMC members and to hold teachers accountable for learning standards. In contrast, while the RTE advocates community oversight and monitoring of teachers, it does not suggest any means whereby this can be accomplished. Nor does it require schools to implement procedures that facilitate such oversight.

Additionally, in this sample and in clusters in the third treatment arm, T3, Prajayatna initiated a cluster level intervention in the 2011-12 school year, intended to enhance the institutional capacity of the CRC. Though early discussions with education administrators started in November 2010, the program was introduced in earnest only in the 2011-12 school year.[4] Because the project endline survey was conducted towards the end of the subsequent school year (2012-13), the evaluation of this particular intervention provides only short-run effects; one would normally expect the benefits of working with institutions to materialize only in the medium run, after at least two to three years of active engagement. This should be kept in mind in interpreting the results of this intervention

Through this intervention, Prajayatna worked to strengthen the CRC, identifying shortfalls in infrastructure including computers and the availability or electricity and in other necessary resources such as learning material. Plans were developed to enable the funds required to bridge existing resource gaps,

[4] The evaluation of this intervention was possible, only because we had initially also allocated a treatment sample for a teaching intervention that Prajayatna had proposed to implement at the level of the cluster. This intervention could not be implemented, because the State Government initiated its own teaching intervention in all schools, tied to the implementation of a new instructional method for classes 1-3.

either by drawing on existing (but unutilized) sources of funds from the Department of Education, village governments and other high level institutions, or by raising the necessary amount from the community. Prajayatna volunteers then worked to provide the necessary support and training to CRPs to ensure effective utilization of available resources. For example, computer training sessions were organized and the help necessary to computerize and maintain records was provided.

Through the CRC, Prajayatna also worked with teachers in cluster schools. In collective meetings organized at the CRC, Prajayatna initiated discussions on the learning process and effective teaching strategies, helped formulate lesson plans, discussed evaluation strategies and emphasized the need to maintain portfolios of students' work. These meetings also provided feedback to teachers on their classroom strategies and teaching effectiveness.

Since the cluster level intervention was the only intervention introduced in T3 schools, the "pure" effect of this intervention, without any confounding effect of the additional interventions in T2 (primarily an introductory level village meeting and then the facilitation of government network meetings), is best evaluated through a comparison of outcomes in T3 schools relative to the control sample.

3.2 Implementation

Right from the start, the program was subject to considerable delays. The hallmark of the most comprehensive treatment arm (T1) was its objective of ensuring that monthly SDMC meetings were held. These meetings represented the point of interaction between the NGO and the committee, and were the means of providing training to SDMC members as well as enhancing teacher accountability through discussion of monthly learning records. However, SDMC elections in many schools were slated for 2010-11 (the year in which Prajayatna's involvement with SDMCs through SDMC's monthly meetings was to be initiated), and the anticipation of elections made it difficult to implement the program as planned. Endogenous factors also played a role. Parental work responsibilities and seasonal migration delayed implementation in regions where parents derived their incomes primarily from wage labor. Additional problems occurred in "small" schools with enrollments of 40 or fewer students. SDMC rules are uniform across the state, requiring 9 parent members even in very

small schools.[5] The requirement of a quorum of members at meetings also made it difficult to hold SDMC meetings on a regular basis in small schools.

Recognizing the delay in the initiation of Prajayatna's work program, the last year of the evaluation study was pushed back from 2011-12 to 2012-13. Implementation of the program improved significantly over 2011-12 and 2012-13. However, `variation across schools in the number of training meetings conducted in the first year (2010-11) generated considerable variation in implementation at the end-line. The low average level of implementation of the program is revealed in figure 2 that graphs the total number of meetings at the time of the end-line survey in treatment (T1) schools. Over the three years project period the average number of meetings was only 11, as opposed to the target number of 27 (allowing for school holidays).

4. Study design

4.1 Study sample and tools

Because of spillovers across schools within a cluster, in turn a consequence of the fact that schools are overseen at the level of the cluster and that teachers and SDMC members are also trained by cluster level officials, clusters were chosen as the unit of randomization. The study sample comprised 240 clusters (selected on the basis of proportional sampling) in 11 districts of the state. These 240 clusters were then randomly divided into 4 samples (T1, T2, T3 and control). Within each cluster, an average of 1.5 GPs were randomly selected for the purposes of the study (1 GP in some clusters, 2 in others). Two schools were then selected in each GP. The main village school was always included, while the second school was randomly selected from the remaining schools in the village. The eventual study sample comprised 720 schools.

Our evaluation of SDMCs is based on a tool designed to assess its managerial capacity, developed in collaboration with Prajayatna. This tool covers all aspects of school management that SDMCs are responsible for and that were the subject of the training provided by Prajayatna, querying members on their knowledge of their (expected) roles as well as the extent to which they were

[5] This requirement has been raised to 13 members as of December 2012, making it even more difficult for small schools to adhere to a regular schedule of SDMC meetings.

undertaking their duties. For example, given that the SDMC is charged with responsibility for ensuring attendance of students, the section of the tool relating to this task first queried members on their knowledge of their duty to ensure enrollment, then asked for information on student attendance through a battery of questions that built on each other ("are there any children in your school who do not attend regularly"; "if yes, can you tell us numbers"; "have you discussed student attendance in a SDMC meeting"; "If yes, were any concrete decisions made regarding attendance?" "Can you tell us what these decisions were"). Thus, we scored members for each task entrusted to the SDMC, and cumulated these into an overall score. This management tool was answered by four randomly selected members of each SDMC. Figure 1 provides a histogram of the SDMC score at baseline, demonstrating its variance across SDMCs.

To evaluate the effect of the CRC intervention, we also fielded a baseline and endline survey of CRCs, conducted in August 2011 and February 2013 respectively. These surveys focused on gathering information on inputs that Prajayatna hoped to affect such as infrastructure and the availability of records on different school inputs.

We collected detailed information on schools through a school survey, as well as basic information on the village and the village government through a village government survey. From school records, we obtained scores from school-administered tests in September 2012 (the most recent set of school test results available at the time of our end line survey). [6] Finally, we also fielded a household level survey for all children who were enrolled in grade 3 in 2009-10.

4.2 Test Scores, Sample Attrition and Test absenteeism

In each school, we undertook testing of all students enrolled in grade 2 and 3 at the time of the survey. These two cohorts of students were tested at baseline (August 2010), and then again twice in the final year of the study (July 2012 and February 2013). Students were tested in language and mathematics. The tests were designed by a testing agency in Bangalore, Karnataka. Each test provided a battery of questions that would enable an evaluation of the student's

[6] While school tests were also conducted in earlier years, the state implemented an Activity Based Learning curriculum for grades 1 through 3 that evaluated students on a completely different system based on milestones and steps. The learning strategy for these early grades also required teachers to ensure that all students met the stipulated milestones and steps at the end of each grade. Therefore, student performance along this metric is difficult to evaluate.

competency at grade-level standards (prescribed by the state) as well as competencies at lower levels. For example, the tests for students in grade 4 included sections based on required competencies at grades 2 through 4. Given low levels of learning in this state, as in all other states of India, this ensured that we would get an accurate representation of students' learning levels and that our results would not suffer from the lack of variance that frequently occurs when students are tested only at the level of the grade in which they are enrolled (since very few students are actually at the level for their grade). To ensure the validity of this test, they were discussed with other leading organizations working in education, including members of Pratham, India's leading NGO in this field.

In this paper, we utilize test results only for the younger cohort of students who were in grade 5 at the end line (2012-13). This is primarily because students from the older cohort who attended lower primary schools, which extend only until grade 5, have to move to a new school on completion of this grade. This causes a relatively greater degree of sample attrition amongst this older cohort of students.

Sample attrition, of course, also occurs amongst the younger cohort of students. However, the proportion of dropouts[7] does not differ significantly between the three treatment arms and the control sample.[8] An additional concern is that the program may have affected student absenteeism and that, in turn, any differences in absenteeism rates across samples affects test scores. The survey team stayed in the village for 1 to 4 days and also visited the homes of absent children to ensure their attendance over the survey period. As a consequence, the absenteeism rate for tests is low. This rate also did not vary significantly across treatment and control samples (Gowda et al 2014). However, the lack of variation across samples in missing values for test scores does not imply that the program did not affect attendance on regular school days. Our study also evaluates the effect of the program on regular student attendance, and the results are discussed in section 8.

4.3 Basic Evaluation Methodology and regression samples

[7] Defined as those who attended school regularly in the 2010-11 school year, but not in the last year (2012-13).

[8] A detailed comparison of drop out and attendance rates is included in Gowda et al (2014).

Given the randomized division of clusters into treatment and control, a simple comparison of outcomes across treatment and control samples provides evidence on the effectiveness of the program on these outcomes. We therefore start by providing such comparisons for a wide variety of outcomes that may have been affected by the program.

For evaluating the effect of the program on SDMC managerial quality and test scores, we compare outcomes across treatment and control samples using a regression in which outcomes are regressed against indicator or "dummy" variables for each of the treatment samples. While the base regression provides estimates equivalent to a comparison of mean outcomes across samples, the regression approach enables an improvement in the precision of estimates through the inclusion of additional regressors that help reduce unexplained variance in the regression.

We therefore also report results from an expanded regression that includes attributes of the school, the headmaster and the community. School level variables are a quadratic in school size, the proportion of students from scheduled (backward) castes and tribes, the average school test score from the baseline survey (August 2010), the number of classrooms in the school, and indicator variables for whether the school has drinking water and functional toilets, for schools located in the main village, and for lower primary schools.[9] Regressions also include the head master's age and an indicator variable that takes the value 1 if he or she is a member of a scheduled caste or tribe. Household or community attributes included in the regression are the proportion of households who derive their income primarily from income earned as unskilled agricultural laborers, the proportion of mothers who are illiterate, and wages for unskilled male and female agricultural laborers in the village. Since village governments, known as *Gram Panchayats*, are also vested with responsibility for schools and SDMCs, regressors also include an indicator variable for whether the President of the village government is a woman and for the number of schools that come under its jurisdiction. Regressions also include indicators for the ranking of the district in the state's educational quality index and, in the case of regressions on test scores, a set of district level dummy variables. Finally, regressions on test scores also include indicators for the gender of the student and for his or her caste.

[9] Primary schools in the state divide into those that offer only grades 1-5 ("Lower primary schools") and those that also offer higher elementary grades.

Regressions with the SDMC management score for the dependent variable are for the set of schools with functioning committees, defined as those that have had an election since 2006. This results in a 5% reduction in sample size. We also trim the sample by removing committees with scores in the top 1%. Missing data on the set of control variables (primarily agricultural wages and village-level attributes) further reduce the sample size for regressions on SDMC management scores to 660 schools. The regression sample for test scores is approximately 9,500 students.

In all regressions, standard errors are clustered at the level of the administrative cluster that oversees schools to allow for correlation of SDMC quality and test scores within cluster schools.

5. Descriptive statistics from the baseline survey

5.1 Summary Statistics

Table 1 presents summary statistics for a set of school and household variables, the proportion of school days attended by each student, and scores from tests conducted by our survey team for language and mathematics. The data is from the baseline school and household surveys conducted in 2009-10 and from baseline test scores in August 2010. The table also reports scores from tests set and graded by school teachers in September 2012, the last set of school test results available at the time of the end-line survey. Though these end line scores do not speak to the validity of the randomization, they are presented primarily to enable a comparison with survey test scores. This topic is discussed in more detail in section 5 below.

The baseline data reported in this table validate the randomization of the sample at the cluster level, providing data on mean values of several school and student characteristics across the three treatment samples and the control. The table also reports t statistics for the null hypothesis of no difference between the relevant treatment sample and the control. Of the relatively large number of variables tested (additional variables were tested but not reported since they all generated insignificant differences), only 1 pair revealed a statistically significant difference from the control (school size in T3 relative to control).

The statistics in table 1 document the better infrastructure in schools in Karnataka relative to other states of India. School size is generally small, with an average of 24 students to each teacher. Despite this, performance in tests is poor, with the mean score in language being 46.5 for students in grade 2 in 2009. Similarly, the mean score in mathematics is only 32.5. Management scores for SDMCs are also generally low, averaging 40% over the sample.

5.2 School and survey tests

As previously stated, our survey tests were developed in accordance with state-stipulated standards for each grade, and validated by a team of external assessors. However, parents and members of local school committees lack access to the results of standardized external tests, particularly since the 2009 Right to Education Act that removed such testing at the elementary school level.[10] Instead, their knowledge of children's learning levels, given low parental education and hence difficulties in assessing learning standards on their own, comes only from teachers and presumably reflects teachers' evaluations of student performance in class tests in addition to their direct observations of each child. The availability of school test scores allows us to assess whether they evaluate the same set of skills, and provide comparable information on learning levels, as our survey tests.

Distribution functions for school (September 2012) and survey (July 2012) test scores, for language and mathematics, are graphed in figures 3a and b respectively. The figures reveal that the distribution of school test scores lies to the right of survey tests: school test scores significantly exceed survey test scores, with the mean school score on language being 66.7 with a standard deviation of 17.8, compared to a survey score of 37.1 (standard deviation of 21.2). Mean school and survey scores for mathematics are 63.4 (standard deviation of 17.3) and 37.1 (standard deviation of 21.2) respectively.

To evaluate whether this is just a matter of scaling, the same figures also plot the distribution of test scores, for students in grade 5, but based on questions that test competencies at the level of grade 3. School test scores lie to the right of even this distribution, suggesting that school tests evaluate students at a level below that prescribed for grade 3 students.

[10] Prior to this, the state government did run a state-level test that was administered to students in elementary school, and formed the basis for evaluating learning in schools.

Some indication of the variation in school and survey scores across students of the same attributes is revealed in figures 4a and b. These figures plot distributions of test scores for students from general castes and from scheduled castes and tribes, separately for language and mathematics. In language, school test scores reveal a slightly larger gap by caste than do survey scores. This is more noticeable for mathematics where school tests reveal a significant difference in performance by caste, even though survey tests suggest no such difference.

It may still be the case that both tests identify the same set of "good" and "weak" students; those who score well in survey tests may also score well in school tests, so that both tests are equivalent in identifying ability differences across students. If so, the two scores should be closely correlated. Comparing these two sets of scores for the same set of students (those in grade 5 in 2012-13), the correlation in language scores is 0.41. However, the correlation in math scores is much weaker, 0.25.

The low correlation in math school and survey scores is evident in figures 5a and b that plot the distribution of school test scores for the set of students who placed in the bottom and top quartiles of the survey test respectively. These histograms reveal that a significant proportion of students who place in the bottom quartile of the survey test distribution score well on school tests. And, correspondingly, many students who place in the top quartile of survey scores perform poorly in school tests. This difference in the skill set identified by school and by survey test scores suggests differences in their determinants, and hence in their responsiveness to different policy instruments.

6. Results: comparison of outcomes across treatment and control samples

In this section, we compare outcomes across treatment and control samples for a wide variety of outcomes that might have been impacted by the project. We initially exclude SDMC quality and test scores, leaving our analysis of these outcomes to the next section. We start this section with statistics reflecting parental knowledge and beliefs about schools. Any impact of the program on community ownership of schools would be reflected in such measures. We then move on to factors that reflect the village government's and the CRC's involvement in schools. As previously discussed, the T1 and T2 treatment arms

included a program targeted at strengthening village school network meetings organized by the village government's Civic Amenities Committee. Strengthening the CRC was the main objective of the T3 intervention.

6.1 Household knowledge and beliefs

Table 2 provides household responses to questions relating to their knowledge of and support for schools, and their expectations of SDMCs. Data from the baseline and the endline surveys are provided. It should be noted, however, that except for the introductory meeting, Prajayatna did not work directly with households or target them in any way. Any change in household attitudes as a consequence of Prajayatana's programs could only occur through SDMC engagement with parents. Though it is expected that SDMCs should serve as a bridge between parents and schools, many SDMCs do not view this to be an important responsibility, but instead believe that their primary responsibility is to work to strengthen schools.

Table 2 documents relatively little involvement in, or knowledge of, schools by parents even at the time of the endline survey (February 2013). Less than half of parents know about the parent's council for schooling (that is supposed to meet every three months), or know who the chairman of the SDMC is. Lack of involvement in schools mirrors lack of involvement in community institutions in general; only 29% of households report attending the village-wide Gram Sabha (meeting) that is organized by the village government. Similarly, less than half of parents believe that the SDMC can serve any useful role in schools; averaging across function-specific responses, only about 42% of households believe that SDMCs can be useful in some capacity.

However, as revealed in the lower panel of this table, these numbers are significantly higher than those recorded in the baseline survey; in 2009, only about 23% of households believed that the SDMC could play a useful role. This considerable change in the view of SDMCs in a 3 ½ year period is noteworthy.

This same improvement over time characterizes parents' responses to questions regarding the possibility of any direct contribution by parents to schools and measures of their actual contribution (documented in the continuation to table 2). In the baseline survey, the percentage of parents who thought that they could provide financial support to schools, contribute hours of work to school improvements, help in the classroom or help organize school events ranged from 11% to 20%. By 2013, this had improved to a range of 46% to

65%, a significant improvement. However, even though many parents believe that they can contribute to schools, the percentage who stated making an actual contribution (monetary or labour hours) was very low, with the exception of help in the form of organizing school events. Approximately 38% of parents stated that they had helped in the organization of school events, up from 10% in 2009. The percentage of parents reporting other contributions, however, ranged from 3% to 9%. Though an improvement over the range of 0.004% to 2% in 2009, clearly household involvement in schools remains low.

The same table also provides data separately for the three treatment samples and for the control sample. A comparison of outcomes shows no significant difference in any outcome between the intervention and control sample, either in baseline or at the time of the endline survey.[11] However, as noted at the start of the survey, Prajayatna did not work directly with parents, so that any change could only have come through the SDMC. Our data suggest, however, that parents' involvement with SDMCs, as reflected in their attendance of meetings of the parent's council or their knowledge of the SDMC chairman, is low. Given this, the lack of a difference in these outcomes across treatment and control samples is, perhaps, not surprising.

6.2 GP support

Table 3 reports data on GPs, for the full sample and separately for the three different intervention samples and the control sample. Reflecting an average GP population of 6.452, the average number of members of each GP is 16.[12] On average, GPs have jurisdiction over 7 schools.

Most GPs in our sample report that they have formed a CAC (88%), and that the CAC has met in the past year (71%). A similar percentage reports that a meeting involving members of school SDMCs was held (70%). CAC meetings are supposed to be held once every 3 months, suggesting 4 meetings over the course of the year. On average, GPs report 2.58 meetings in the previous school year. A smaller percentage of GPs report that an annual school development plan was formulated as required (61%). Data across samples reveal no statistically significant difference in the number of meetings across samples, though the proportion of GPs with a school plan was marginally higher in T1 schools (67%) relative to control (62%). Schools in the T2 sample, in which

[11] This was verified through statistical tests of significant differences in outcomes across samples. For the state of brevity, those test statistics are omitted, but are available on request.
[12] Karnataka requires one GP member per 400 population.

Prajayatna did not work intensively with SDMCs but continued to work with GPs, were not characterized by either more meetings or by a greater incidence of school plans developed by the Gram Panchayat.

The last row of the table reports the number of CAC meetings facilitated by Prajayatna, from its implementation records. This number does not significantly differ from the number of meetings reported by the Gram Panchayat. Prajayatna did not, therefore, increase the number of meetings (these were already high relative to requirements), but instead worked with CAC members during these meetings.

6.3 Cluster Support

Table 4 reports data on Cluster Resource Centers, focusing on their infrastructure, in 2011-12 (baseline for Prajayatna's CRC intervention) and at the end of the 2012-13 school year (endline for our survey). On average, each CRC covers 12 schools, and an elementary school population of 734.

Clusters in the state were reorganized at the start of the 2011-12 school year, so as to ensure that no cluster had more than 18 schools. The creation of new clusters resulted in a significant increase in the number of clusters, and may explain why a large number of clusters report inadequate infrastructure in the 2011-12 school year. Only 54% of CRCs report that they had a building for their operations, and only 44% report adequate meeting space. Similarly, only 50% report having a cabinet, and 29% report the availability of electricity. No clusters in our sample had access to a computer at the start of the 2011-12 school year. These percentages improve significantly in 2012-13, perhaps reflecting increased investment by the state government in clusters after the reorganization.

A comparison of outcomes across the T3 treatment sample (T3), in which the sole intervention was the CRC intervention, relative to control reveals that, though there was little statistical difference in these two samples at baseline, ownership of most assets was significantly higher in T3 schools by the end of the 2012-13 school year. This is particularly true of the availability of electricity and computers, with approximately 50% of T3 schools reporting ownership of computers, relatively to 4% of control sample schools. These two assets are also the ones for which T2 schools recorded a marked improvement over the baseline and in comparison to the control sample. As previously noted, Prajayatna's initial activities in this intervention involved discussions on existing resource shortages, the development of plans to raise the necessary funds

required to correct these imbalances, and the provision of computer training. Our data suggest that Prajayatna efforts to strengthen CRCs' resource base were successful.

This is graphically revealed in figure 6. This figure plots the difference in the proportion of clusters reporting ownership of specific assets between the endline and baseline surveys, separately for clusters in T3 (denoted as sample 3 in the bar charts) and those in the control sample (denoted as sample 4). The graph attests to the improvement in infrastructure between these two survey years: The difference is positive for each category of asset. It also reveals the significant improvement in the proportion of clusters reporting computers and the availability of electricity in the treatment sample relative to the control.

Table 5 reports data we collected on the number of training meetings for teachers (the "sharing" meetings) conducted by the CRC, as well as on the maintenance of different types of records in the cluster office. The maintenance of records was confirmed by our survey team by direct examination.

A high percentage of CRCs report monthly sharing meetings over the course of the school year, suggesting that this form of in-service training is well institutionalized in the state. The relatively lower percentages for the 2011-12 school year, particularly for the number of meetings, reflects the fact that the 2011-12 data were collected at the start of the school year, while the 2012-13 was collected at the end, and the survey question related to the number of meetings conducted over the course of the *current* school year.

The data reveal a large and significant improvement in the proportion of schools reporting maintenance of all types of records between the 2011-12 and 2012-13 school year.[13] At baseline, maintenance of the attendance and academic performance of individual students was particularly low (6% and 5% respectively), as were records of individual teacher absenteeism (16% and 9%). By 2012-13, these rates had improved to 51% for individual student absenteeism, 50% for individual student academic performance, and 56% for individual teacher absenteeism. The data reveal, however, that this increase occurred across all clusters, including the control. It appears that there was a general improvement in the functioning of the CRC across the state.

[13] In the interest of brevity, the table provides results for only a subset of the records maintained by the CRC. Results for other records (such as the maintenance of school-level data (instead of individual data) on student academic performance, student absenteeism and teacher absenteeism reveal the same trends.

A different picture emerges from an examination of whether these records were computerized. Given that both T2 and T3 clusters recorded significant improvement over control clusters in ownership of computers and the availability of electricity, it is not surprising to find that T2 and T3 clusters are the only ones that report a significant improvement in the computerization of records. This difference in how records are maintained likely has a significant impact on the ability of the CRC to use data effectively. Thus, Prajayatna's intervention likely *did* result in an improvement in CRC effectiveness in ways that are difficult to measure.

7. SDMC quality and test scores

7.1 SDMC quality

Our analysis of the effect of the program on SDMC managerial quality and test scores starts with the standard approach to identification in RCTs, comparing mean outcomes across treatment and control samples. Results from OLS regressions (table 6) test the significance of the difference in mean effects of treatment on both SDMC quality and test scores. The table reports results from both a linear specification of SDMC quality as well as from a log-linear specification and hence explores the sensitivity of estimates to functional form. It also reports results from regressions that include the set of auxiliary variables previously described.

The T1 indicator has a statistically significant effect at the 10% level on SDMC quality. The log-linear specification generates a more precise estimate that is statistically significant at the 5% level. This result is important; it implies that it is possible to improve the managerial quality of local community institutions through training, even in relatively poor areas characterized by high levels of adult literacy.

The coefficient on the indicator variable for T2, the treatment arm with a less intensive SDMC intervention, has an insignificant effect on SDMC quality. This finding supports other studies that find that providing information to communities on schools through a one-time meeting has little effect on community involvement in schools and on learning. In combination with the results from the T1 intervention, our study finds that significantly improving the quality of local schooling institutions requires an intensive intervention that works regularly with these institutions over several years.

The T2 clusters also included the CRC intervention as of 2011-12. Given the insignificant effect of the T2 intervention on SDMC quality, it is not surprising that the "pure" CRC intervention sample, T3, also has an insignificant effect on SDMC quality. This is despite the fact that CRCs are involved in the training of SDMC members and that the CRP's functions include the monitoring of the SDMC. It is possible, however that the lack of any significant effect from the CRC intervention reflects the fact that our evaluation was conducted approximately 1 ½ years after the program was initiated.

7.2 Test Scores

The effect of all interventions on language and mathematics test scores appears to be very limited. The coefficient on the intensive intervention, T1, is relatively large in magnitude. However, the relatively large standard error associated with this estimates renders it statistically insignificant at conventional levels. The effect of all three interventions on math scores is of lesser magnitude and also statistically insignificant. [14]

To better understand this result, we consider two explanations for the insignificant effect of SDMC managerial quality on learning. The first relates to the interpretation of the results that compare outcomes in randomized treatment and control samples in the institutional context of SDMCs while the second derives from a consideration of the outcomes for which teachers are accountable.

7.3 Interpretation of results from the RCT

When there is variation in implementation, and the program is not fully implemented as designed, then the results from a randomized control trial (RCT) that compares outcomes in treatment versus control samples is generally interpreted as estimating the "intent to treat," or the average effect of the program on all treatment schools, at observed implementation levels. In such a setting, a low estimated value may simply reflect a significant departure from full compliance. As previously discussed, implementation of the project in terms of the number of SDMC training meetings was relatively weak, and this may explain the relatively small effect of even the T1 intervention on test scores.

[14] There is no difference in regressions for test scores between a linear and a log-linear specification. For purposes of brevity, we report results from the linear specification only.

In such cases, a natural question to ask is how effective the program might have been if it had been possible to conduct more f training meetings with SDMCs. This question can be addressed by considering the relationship between test scores and the number of SDMC meetings conducted under the project, exploiting the variation in the number of meetings across schools.

Such an analysis of the effect of training on SDMC quality differs, however, from the conventional analyses conducted in most studies that exploit a RCT, in that the focus shifts from an analysis of the overall effect of the program to an analysis of the effect of training on the quality of the SDMC. Consideration of this question suggests another source of regression mis-specification. SDMC elections are held every two to three years, and all SDMC members are replaced with new members in each election so that there is little "carry over" from one SDMC to the next. Since every school in the survey area witnessed a change in the SDMC during the course of the project, regressing test scores on the total number of training meetings conducted by Prajayatna combines the effect of training sessions with the previous SDMC with those conducted with the SDMC currently in place. If, because of turnover amongst SDMC members, training sessions with old SDMCs have little effect on the quality of the current SDMC, then estimates of the effect of the program on test scores will generate lower estimates than would be obtained through regressions of the effect of the number of training sessions with the current SDMC.

Gowda et al (2014) provide results that separate out the effect of training sessions with the current and old SDMC.[15] The results from their analysis, replicated in table 7, reveal that the number of meetings Prajayatna conducted with the current SDMC, but not with the previous SDMC, has a significant effect on current SDMC management quality. This differential effect of meetings with

[15] To identify the effect of these two distinct "treatments," they recognize that the project time under the new and the old SDMC reflects the date at which elections were held. In turn, they argue that, since elections were called by the "old" SDMC, in place at baseline, the election date reflects the quality of the old SDMC as measured by its management score (assessed through the baseline survey). This baseline score was unaffected by Prajayatna's treatment, suggesting its suitability as an instrument to identify the effect of the number of meetings with the old and new committee on test scores. However, the dynamic nature of learning suggests that the quality of the previous SDMC may directly affect learning. Thus, the instrument used by the authors is the interaction of the T1 indicator with the quality of the old SDMC, and the quality of the old SDMC is allowed to directly affect learning. The validity of the instrument is ensured by the random selection of the T1 sample.

the old and new SDMC reduces the overall impact of the program on current SDMC quality; the project essentially involved two distinct treatments, one with the current SDMC and one with the old, with only the former affecting current quality. The lack of effect of the program as perceived in regressions that simply regress SDMC quality on treatment indicators thus reflects the fact that these regressions identify the overall effect of the program on SDMC quality and not the effect of training provided to the SDMC in question on its quality.

The results have several important policy implications. First, they suggest that improvements in implementation, reflected in the number of meetings with the SDMCs, can significantly enhance learning. Second, the results also suggest that policies that enhance the "carry over" from one SDMC to the next can significantly enhance the value of training programs.

Because the treatment indicators do not well capture the effect of the program on the quality of the current SDMC, they are also weak instruments for identifying the effect of (current) SDMC quality on test scores. More precise estimates of the effect of the quality of the (current) SDMC on test scores can therefore be obtained by using as instruments (exogenous) attributes of the current SDMC that are correlated with its quality, but have no direct effect on student learning.

Using the age or tenure of the current SDMC as an instrument, the regressions reported in table 8 reveal a strong effect of SDMC management quality on language test scores. The OLS regression and the first two IV regressions in this table combine the performance of students across questions that test their knowledge of expected competencies for their grade and two lower grades. Separating out the results for their enrolled grade (grade 5) and for one grade lower, the table reveals that the effects of SDMC quality on learning are high when students are tested for competencies expected of their current grade, and even stronger when tested against competencies expected of them in grade 4. For mathematics, the magnitude of the estimates are similar to those obtained for language tests, but a relatively high standard error implies that they lack statistical significance. These estimates are in stark contrast to the insignificant effect of treatment indicators on test scores in table 6.

The results of this section therefore provide one explanation for the low effect of the overall program on test scores, as reflected in regression estimates of test scores on treatment indicator variables; the program worked with both

the current SDMC and the previous SDMC, but meetings conducted with the previous SDMC did not impact the quality of the current SDMC. However, as stated earlier, the difference between estimates based on treatment indicators, that reflect the combined effect of the previous and current SDMC, and those that better capture the quality of the current SDMC suggests the need for policies that enhance the carry over value of the previous SDMC.

7.4 Accountability and assessment

Our second explanation for the relatively insignificant effect of the project on SDMC quality builds on the literature on accountability and assessment. As is well recognized by this literature, accountability systems give schools incentives to improve scores only along the dimensions on which they are evaluated; they need not result in improvements in general skills or skill sets other than those for which schools are accountable. In Texas schools, for example, Klein et al (2000) demonstrated that accountability resulted in improvement in the test scores that schools were evaluated on (the Texas Assessment of Academic Skills, TAAS), but not in scores on other comparable tests (National Assessment of Educational Progress, NAEP). This difference between achievement in "high stakes" versus "low stakes" tests has also been noted by other researchers (Figlio and Rouse 2006; Jacob 2005). And, while it may well be the case that different tests measure different skill sets, there is also the possibility that teachers may simply inflate scores for those students who matter the most in order to meet accountability standards (Jacob and Levitt 2003).

The link between accountability and assessment in developing economies has not received the same attention that it has in developed economies. For example, even while the Indian government emphasizes the importance of holding teachers and schools accountable for improving learning, the Right to Education Act of 2009, which mandates the formation of School Management Committees and their centrality in ensuring school accountability, eliminates any centralized testing of students during elementary school, leaving assessment up to schools and teachers (through a system referred to as "continuous and comprehensive" evaluation). Local communities can then evaluate learning improvements only on the basis of information provided by teachers. On the evaluation side, researchers are justifiably hesitant to evaluate learning based on school-specific scores. Instead they commonly implement their own external tests based on state-specific standards. While results from these tests may provide evidence on the effect of the project on learning, limited improvement

in test scores may still be consistent with the success of the program in improving the accountability of teachers if differences exist in the measures used to hold teachers accountable and the results obtained in the tests administered by researchers.

As previous noted, in the context of our study, teachers are held accountable for the scores they report on tests that are administered and corrected by them, "school" test scores, not the survey test scores administered by our survey team. It may well be the case that the relatively small effect of the program on test scores reflects the fact that teachers are not accountable for survey test scores. To examine this hypothesis, we report results (table 9) from regressions that test the difference in *school* test scores between treatment and control schools. For purposes of comparison, the table also reproduces results from regressions of treatment indicators on survey test scores, from table 6.

These regressions reveal a marginally significant effect of the intensive treatment (T1) on language scores in tests conducted by schools, and a strong effect on mathematics school scores. Recall that it is in mathematics scores that school scores deviate most from survey test scores. These results suggest that the program was, in fact, effective in enhancing accountability of teachers, but that this is only weakly reflected in survey test scores. The results also reveal that this effect on school test scores only obtained in the intensive treatment arm (T1). The statistically insignificant effect of the T2 indicators on test scores suggests that the village level network meetings, the introductory informational meeting, and the intervention to strengthen the CRC, the interventions conducted in T2 schools, do not enhance accountability.

The implications of this result are best understood when read in combination with our earlier results of the effect of SDMC quality on survey test scores. To the extent that survey test scores either more accurately measure student learning, or capture a different dimension of student learning than that measured through school tests, the previously documented effect of SDMC quality on survey test scores (particularly for language) implies that enhanced SDMC quality does improve learning. But, the relatively low correlation between school and survey test scores, particularly for mathematics, suggests that such improvements in test scores may accrue through pathways other than any effect on teacher accountability. The effect on school test scores, for which teachers *are* accountable, suggest that the effect on survey test scores would have been far stronger, if teachers *had* been accountable for the results of our survey tests.

8. The effect of the interventions on other outcomes

The analysis, so far, has concentrated on the effects of the program on test scores in language and mathematics. The results reflect outcomes over a three year program period. However, the effect of any program on learning may be limited in the short to medium run and may only manifest themselves over a longer time period. It is thus also worth considering if the program affected other schooling outcomes and inputs that may improve learning over the long run. In this section, we report regression results from simple regressions of different outcome variables on the indicator variables for the three treatments (T1, T2 and T3), and thereby provide evidence on whether the overall package of inputs in different interventions affected the outcome in question. The outcomes we consider are student attendance, school funding from various sources (SDMC, the village government and the community), and a measure of teacher management skills.

We focus on the effect of the overall program on these outcomes, rather than that of the number of meetings conducted with the current SDMC, because many of the outcomes we examine, such as teacher quality funding form different sources and even student absenteeism, are likely to have been affected by Prajayatna's direct engagement with the community, not just through the effect of the program on SDMCs.[16]

8.1 Student attendance

We measure student attendance as the proportion of school days attended by students, using the school's administrative records on daily student attendance. For the sample as a whole, average attendance rates are 0.87, implying that, on average, students are absent for approximately 13% of school days.

To assess the effect of the program on student attendance, we report regression results (table 10) of the proportion of days attended by students on the three different treatment indicators. The first regression in table 10 reports results for the full sample of students. Regressions (2) and (3) trim the sample to

[16] Gowda et al (2014) also report results from regressions that examine the effect of current SDMC quality on the outcomes considered in this section. They generally find statistically insignificant effects.

omit the students who fall in the lowest percentile and those with attendance rates in the bottom 5% of the distribution respectively. Finally, the last regression, run on the same sample as regression (3) also includes additional regressors so as to improve the efficiency of estimates.

All four regressions suggest that the three different programs had no significant effect on student attendance. To the extent that student attendance reflects decisions made by parents, and hence parents assessment of the returns to attending school, these results suggest that the program did not significantly affect parents' perceptions of the returns to attending school. It should be noted, however, that for the sample as a whole, attendance in the state is significantly higher than that in other states, so that this indicator may not be an effective measure of how parents value schooling.

8.2 School funding

Since one of the objectives of the program was to enhance community ownership of schools, another measure of the success of the program in this regard is whether it resulted in an increase in funding from community sources or from the SDMC. We consider three different sources of community funds: funds from the SDMC, from community members directly, and from the Gram Panchayat.

Table 11 documents that the proportion of schools reporting funds from these sources ranges from 0.28 to 0.32. However, the amount of funding provided, across all schools, is very small. In the 2011-12 school year[17], for example, the average amount of funding received by schools from SDMCs was only Rs. 802. The average amount of funds received from community members was similarly small (Rs. 1,446), with Gram Panchayats being a relatively more important source of school funds (an average of Rs. 9,067). These low levels of support primarily reflect the fact that schools receive the vast majority of their funding from the Central Government, through its flagship program for elementary schools, the *Sarva Shiksha Abhiyan*. The program provides funds for school infrastructure, but also for general school maintenance, as well as grants to teachers for teacher-learning material. On average, the amount of funds available to schools under this program is Rs. 134,511. Given this, it is not

[17] We consider funding details for the 2011-12 school year, since our endline school survey was fielded at the start of the 2012-13 school year.

surprising that local institutions and community members provide only small amounts of funding, since such funds are viewed as marginal to the total amount available to schools.

Nevertheless, funding from other sources may importantly affect school quality, particularly if they can be used to complement the funds provided by the Central Government. And, the provision of such funds provides a valuable index of community involvement in schools.

Because of the large number of schools who report no funding in 2011-12 from the sources we consider, we utilize a set of probit regressions to estimate the effect of the project on funding. In these regressions, the dependent variable is an indicator variable that takes the value 1 if the school receives funds from the source in question, 0 otherwise.

The results in table 12 reveal an increase in the probability of receiving funds from the SDMC for schools in the intensive treatment arm, T1, and in the T2 sample relative to control schools, but the effect is not statistically significant at conventional testing levels. This remains true even when the regression is expanded to include an additional set of regressors. Similarly, none of the three treatment arms significantly affect funding for schools from village governments. As before, this implies that interventions at the level of the village government do not appear to have affected school funding. In stark contrast to these results, however, the last regression (4) reveals that both the T1 and the T3 intervention arm significantly increased the probability that the school received funds from community members. This supports the view that intensive engagement with the community does enhance community involvement in schools and schooling outcomes

The fact that the effect of the T3 intervention on funding from community sources exceeds that of the T2 intervention is surprising. As previously described, the CRC strengthening intervention was also conducted in T2 clusters. This result may reflect a finding from other studies: Program effects are sometimes stronger when the program in question focuses on a narrow and well-defined objective rather than a large set of goals. The ability of Prajayatna volunteers in T3 clusters to focus on just the one intervention may have resulted in a more intensive cluster intervention in this sample, explaining the difference in results for the T2 and T3 samples.

8.3 Teacher management scores

The cluster level intervention (T3) was primarily intended to improve the quality of teaching and the ability of the cluster to supervise and monitor teachers. While it is difficult to get a measure of teacher quality, we implemented a tool that measures teacher management skills, similar to the tool used to assess the SDMCs management ability. Improvements in managerial skills constitute an important element of the training provided to teachers.

Our survey tool grades teachers on four broad attributes: management skills; interest in teaching and teaching methods; teaching ability and classroom management. Management skills were judged by observing the teacher's maintenance of children's files, and other records and files, and the use made of these. To gauge interest in teaching and in improvement, research staff engaged teachers in conversations on how they improve as teachers, their views of teaching methods and whether they make modifications in these methods over time, their interactions with other teachers and the extent to which they exchange experiences and learn from them, how they respond to feedback, and their level of participation in teachers' meetings. Teaching skills were evaluated through similar discussions on the role of the teacher and schools, on the use of complementary resources and how these are connected to the material being taught, how they keep abreast of the subject matter, and any attempts to develop their own learning material. Finally, evaluators asked teachers about how they interact with students and the ways in which they seek their participation in classroom discussions, whether and how they involve students in other classroom activities, for examples of how they might contextualize some of the subject matter, and for details on how they provide feedback to students (and their parents) on their learning. The average percentage score on this assessment tool was 66%.

Table 13 reports results from regressions of the school average teacher score on the three different treatment indicators, with and without additional regressions. Both regressions generate the same result: there is no statistically significant effect on teacher scores. However, the effect of the cluster level intervention (T3), the intervention targeted towards teachers, does generate a relatively large effect, much larger than that in control schools, and even those in T1 schools. Though this effect is only significant at a 17% level of significant (Prob > |t|=0.172), it is worth remembering that the cluster level intervention was only initiated in 2011-12. The results suggest that this intervention may generate significant dividends over the medium and long run.

9. Conclusion

This study provides an evaluation of a series of interventions by Prajayatna aimed at strengthening local schooling institutions: School Development and Management Committees (SDMCs), village level networks, and Cluster Resource Centers (CRCs), and, through this, to enhance community control over schools and student learning.

The most intensive intervention undertaken by Prajayatna involved working with SDMCs to enhance their managerial accountability and to make teachers more accountable to SDMCs. Simple analyses of the effect of this intervention on SDMC quality finds a significant (though small) effect, but an insignificant effect on student performance in language and mathematics tests conducted by our survey team. Distinguishing between training meetings that Prajayatna conducted with the current and the previous SDMC, we find that the quality of the SDMC improves significantly with the number of training sessions it undertakes, but that there is no carry over effect from training provided to the previous committee. This constitutes one explanation for the low effect of the program on SDMC quality, since the program involved training of both old and current SDMC members. This also explains the low effect of the program on student learning, as revealed in regressions of treatment indicators on test scores. Identifying the effect of SDMC quality through its age or tenure, we find that SDMC quality does significantly affect learning. Our results thus indicate that training can improve the quality of SDMCs, and that this, in turn, can significantly enhance learning. However, to be effective, programs need to ensure carry-over from one SDMC to the next.

We also find that the intensive intervention conducted by Prajayatna improved scores on tests conducted and corrected by school teachers. It is these test scores that were discussed with SDMC members, and that teachers were held accountable for. The effect of the interventions on these “school” test scores suggest that the program did make teachers more accountable. However, deviations between the school and survey test scores suggest the need to also pay attention to assessment when implementing programs intended to enhance accountability; in such programs, it is important to ensure that teachers are held accountable for tests results that accurately measure learning.

As regards the cluster level intervention, the insignificant effect of this intervention on learning is, perhaps, not surprising given the fact that the program was initiated only inn 2011-12 and evaluated after only 1 ½ years. Its

effect on infrastructure improvements, the computerization of records and on community funding suggests, however, that such interventions may pay rich dividends in the long run.

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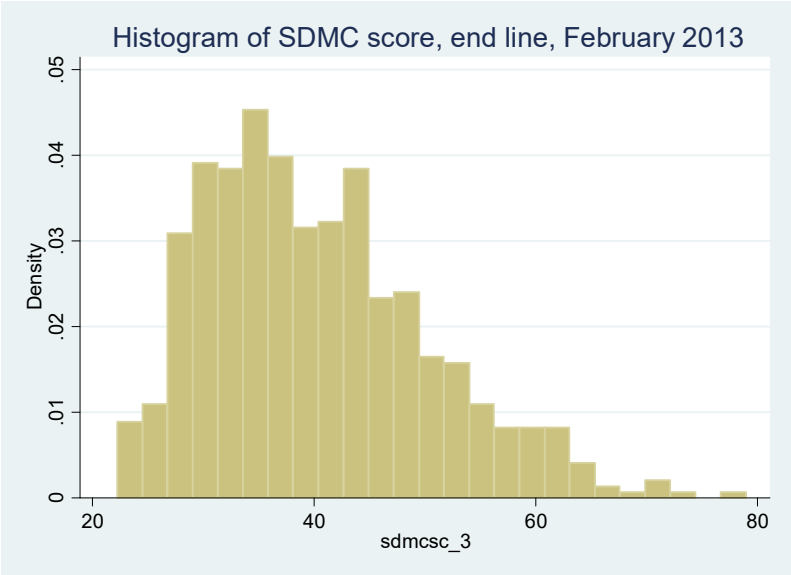

Figure 1: SDMC scores, end line survey

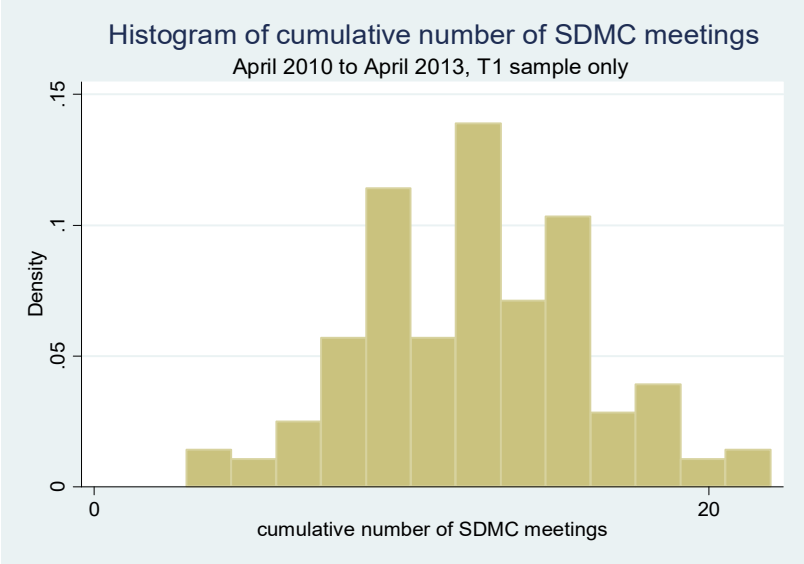

Figure 2: Histogram of total number of SDMC meetings

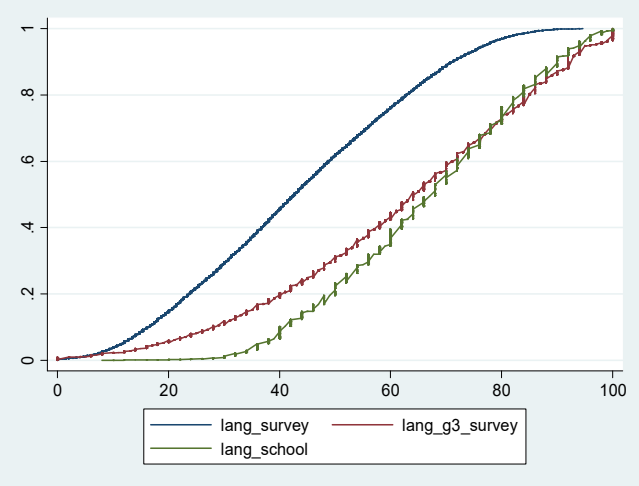

Figure 3A: Survey and School Language Score

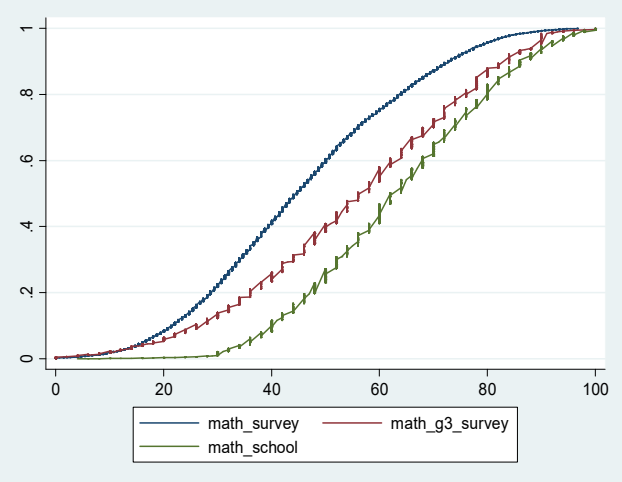

Figure 3B: Survey and School Mathematics scores

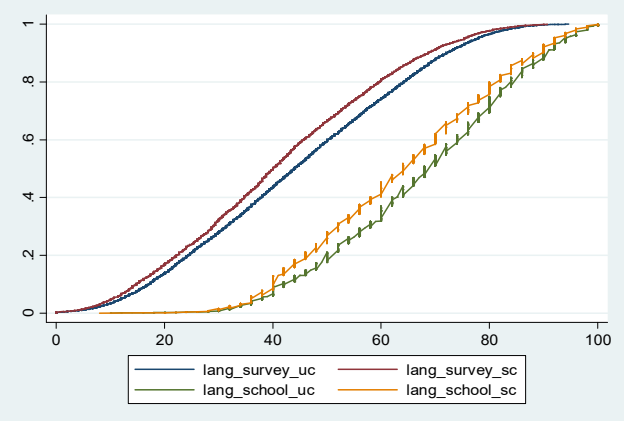

Figure 4A: Survey and School Language scores by caste

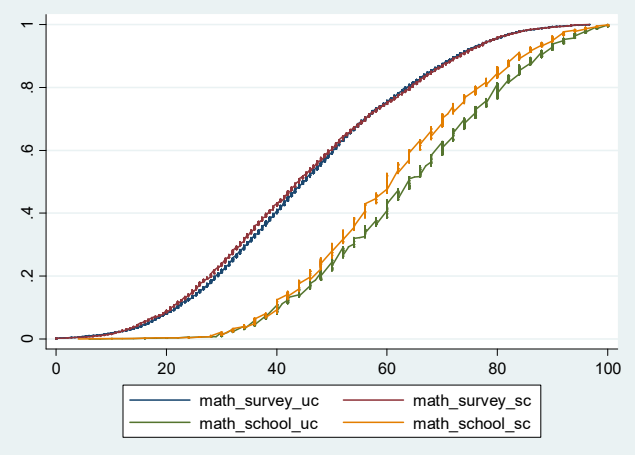

Figure 4B: Survey and school Math Scores by caste

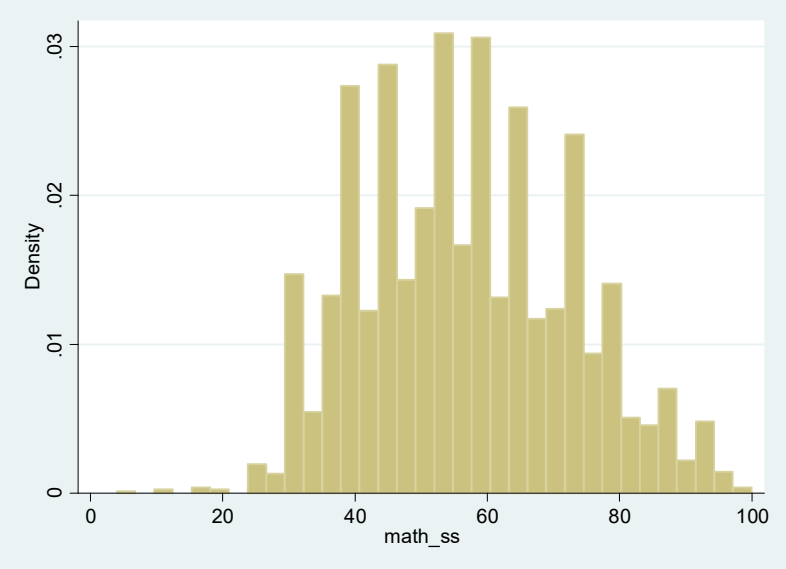

Figure 5a: Math School Scores, students at bottom quartile of survey distribution

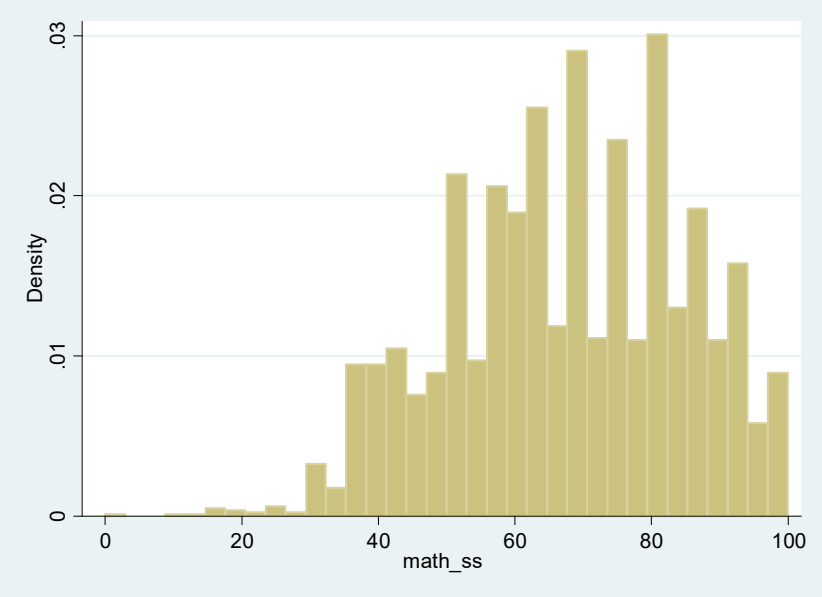

Figure 5B: Math School Scores, students in top quartile of survey distribution

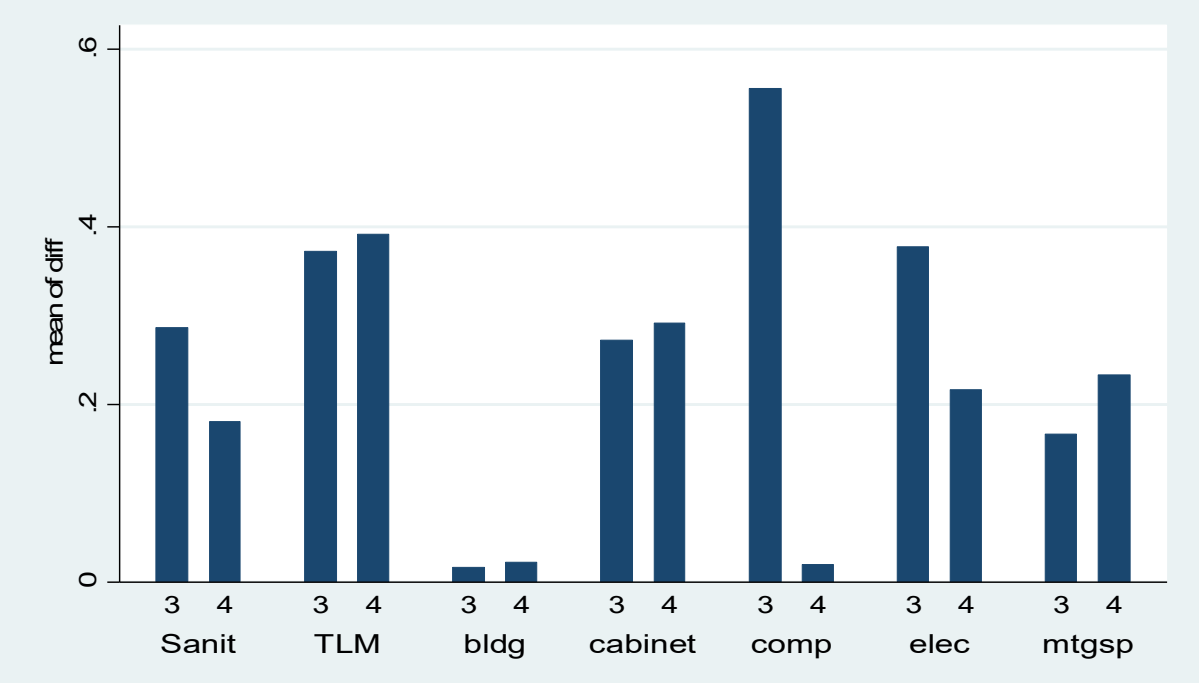

Figure 6: Difference in proportion reporting ownership of assets, by type, between endline and baseline, T3 (3) and control (4)

Table 1: School and household characteristics by treatment and control groups - baseline

Variables	Treatment groups			
	T1	T2	T3	control
School and village characteristics				
Total enrollment	130.47 (8.12)	142.83 (11.20)	154.97 (13.09)	125.50 (7.10)
T stat (prob > |t|)	0.46 (0.65)	1.31 (0.19)	1.98 (0.05)	--
Proportion SC/ST	0.31 (0.02)	0.31 (0.02)	0.33 (0.03)	0.32 (0.03)
T stat (prob > |t|)	-0.23 (0.81)	-0.13 (0.90)	0.31 (0.75)	--
Student teacher ratio	23.76 (0.94)	23.15 (0.99)	24.95 (0.98)	22.96 (0.74)
T stat (prob > |t|)	0.67 (0.50)	0.16 (0.87)	1.62 (0.11)	--
Head master SC/ST	0.29 (0.04)	0.25 (0.04)	0.24 (0.03)	0.31 (0.04)
T stat (prob > |t|)	-0.26 (0.80)	-1.09 (0.28)	-1.34 (0.18)	--
SDMC score	39.60 (1.04)	40.03 (0.96)	40.66 (1.09)	40.82 (0.72)
T stat (prob > |t|)	-0.86 (0.39)	-0.58 (0.57)	-0.11 (0.91)	--
Current SDMC age (months)	23.49 (1.33)	25.86 (1.36)	24.15 (1.37)	24.53 (1.27)
T test (prob > |t|)	-0.56 (0.58)	0.71 (0.48)	-0.20 (0.84)	--
Ag. Wage – female	108.56 (3.69)	108.55 (4.07)	106.00 (4.20)	118.08 (10.21)
T stat (prob > |t|)	-0.88 (0.38)	-0l.87 (0.39)	-1.09 (0.28)	--
Test Scores and attendance				
Grade 2 – Mathematics	41.54 (1.37)	44.05 (1.44)	42.25 (1.24)	43.13 (1.31)
T stat (prob > |t|)	-0.83 (0.41)	0.47 (0.64)	-0.49 0.63)	--
Grade 2 – Language	47.00 (1.42)	49.46 (1.47)	48.22 (1.40)	49.61 (1.48)
T stat (prob > |t|)	-1.27 (0.21)	-0.07 (0.94)	-0.69 (0.50)	--
Grade 2 – attendance	0.82 (0.01)	0.81 (0.01)	0.81 (0.01)	0.81 (0.01)
T stat (prob > |t|)	1.04 (0.30)	0.43 (0.67)	0.25 (0.80)	--

Table 1 (cont)

Child and household characteristics	T1	T2	T3	Control
SC/ST	0.33 (0.02)	0.35 (0.02)	0.35 (0.03)	0.32 (0.02)
T stat (prob > |t|)	0.19 (0.85)	0.92 (0.36)	0.71 (0.48)	--
Family size	5.50 (0.07)	5.51 (0.08)	5.56 (0.08)	5.55 (0.08)
T stat (prob > |t|)	-0.47 (0.64)	-0.40 (0.69)	0.06 (0.96)	--
Prop. owning land	0.62 (0.03)	0.64 (0.02)	0.65 (0.02)	0.63 (0.03)
T stat (prob > |t|)	-0.17 (0.87)	0.22 (0.82)	0.61 (0.54)	--
Father's education	4.54 (0.19)	4.64 (0.22)	4.58 (0.20)	4.50 (0.20)
T stat (prob > |t|)	0.15 (0.88)	0.46 (0.64)	0.28 (0.78)	--
Mother's education	3.75 (0.22)	3.98 (0.24)	3.91 (0.22)	3.81 (0.23)
T stat (prob > |t|)	-0.19 (0.85)	0.52 (0.60)	0.33 (0.74)	--
School scores, end line				
School scores, Language End-line (sept 2013)	68.72 (0.93)	67.20 (0.96)	66.63 (0.92)	66.76 (1.03)
T stat (prob > |t|)	1.41 (0.16)	0.31 (0.76)	-0.09 (0.93)	--
School scores, Mathematics, End line	65.39 (0.97)	63.90 (0.94)	63.32 (1.06)	63.99 (1.07)
T stat (prob > |t|)	0.97 (0.33)	-0.06 (0.95)	-0.44 (0.66)	--

Note: Table reports cluster-level averages (total number of clusters is 240, with 60 clusters in each sample). T statistic under null of no difference between treatment and control

Table 2: Household knowledge and beliefs by sample

Variable	Full Sample	T1	T2	T3	T4
Endline, Feb 2013					
Know about parent's council for schooling	0.42 (0.49)	0.42 (0.49)	0.40 (0.49)	0.43 (0.49)	0.44 (0.50)
Attended parent council	0.51 (0.50)	0.52 (0.50)	0.52 (0.50)	0.49 (0.50)	0.52 (0.50)
Know chairman of SDMC	0.46 (0.50)	0.48 (0.50)	0.43 (0.50)	0.45 (0.50)	0.46 (0.50)
Attended Gram Sabha	0.29 (0.45)	0.30 (0.46)	0.29 (0.45)	0.27 (0.44)	0.30 (0.46)
Believe that SDMC can:					
Improve schools	0.44 (0.50)	0.45 (0.50)	0.43 (0.49)	0.43 (0.50)	0.46 (0.50)
Raise community funds	0.39 (0.49)	0.40 (0.49)	0.38 (0.49)	0.37 (0.48)	0.41 (0.49)
Monitor teachers	0.44 (0.50)	0.43 (0.50)	0.43 (0.50)	0.44 (0.50)	0.46 (0.50)
Monitor child enrollment, attendance	0.39 (0.49)	0.41 (0.49)	0.37 (0.48)	0.38 (0.49)	0.39 (0.49)
Baseline, Nov 2009					
Know about parent's council for schooling	0.25 (0.43)	0.26 (0.44)	0.27 (0.44)	0.22 (0.42)	0.24 (0.43)
Attended parent council	0.21 (0.41)	0.22 (0.41)	0.23 (0.42)	0.18 (0.39)	0.20 (0.40)
Know chairman of SDMC	0.32 (0.47)	0.34 (0.48)	0.30 (0.46)	0.31 (0.46)	0.33 (0.47)
Attended Gram Sabha	0.17 (0.38)	0.18 (0.38)	0.18 (0.39)	0.16 (0.37)	0.17 (0.37)
Believe that SDMC can:					
Improve schools	0.26 (0.44)	0.29 (0.45)	0.25 (0.43)	0.25 (0.43)	0.26 (0.44)
Raise community funds	0.19 (0.39)	0.22 (0.41)	0.18 (0.39)	0.17 (0.38)	0.20 (0.40)
Monitor teachers	0.23 (0.42)	0.25 (0.44)	0.22 (0.42)	0.22 (0.41)	0.23 (0.42)
Monitor child enrollment, attendance	0.23 (0.42)	0.24 (0.43)	0.23 (0.42)	0.21 (0.41)	0.22 (0.42)

Table 2: Household knowledge and beliefs by sample (continued)

Variable	Full Sample	T1	T2	T3	T4
Endline, Feb 2013					
Possible for parents to:					
Give money to schools	0.53 (0.50)	0.54 (0.50)	0.52 (0.50)	0.52 (0.50)	0.55 (0.50)
Contribute hours of work	0.53 (0.50)	0.53 (0.50)	0.51 (0.50)	0.52 (0.50)	0.54 (0.50)
Help in the classroom	0.46 (0.50)	0.46 (0.50)	0.45 (0.50)	0.46 (0.50)	0.47 (0.50)
Help in org of events	0.65 (0.48)	0.64 (0.48)	0.64 (0.48)	0.65 (0.48)	0.68 (0.47)
In past year:					
Gave money to schools	0.09 (0.29)	0.10 (0.30)	0.10 (0.30)	0.08 (0.27)	0.08 (0.28)
Contributed hours of work	0.10 (0.31)	0.11 (0.31)	0.10 (0.30)	0.10 (0.30)	0.11 (0.31)
Helped in the classroom	0.03 (0.17)	0.03 (0.17)	0.02 (0.14)	0.03 (0.18)	0.03 (0.17)
Helped in org of events	0.38 (0.48)	0.36 (0.48)	0.41 (0.49)	0.36 (0.48)	0.39 (0.49)
Baseline Nov 2009					
Possible for parents to:					
Give money to schools	0.15 (0.35)	0.17 (0.38)	0.16 (0.36)	0.12 (0.33)	0.14 (0.35)
Contribute hours of work	0.13 (0.33)	0.14 (0.35)	0.14 (0.34)	0.11 (0.31)	0.12 (0.33)
Help in the classroom	0.11 (0.31)	0.13 (0.34)	0.11 (0.31)	0.09 (0.29)	0.10 (0.30)
Help in org of events	0.20 (0.40)	0.23 (0.42)	0.21 (0.41)	0.18 (0.38)	0.19 (0.39)
In past year:					
Gave money to schools	0.04 (0.19)	0.04 (0.11)	0.04 (0.20)	0.12 (0.33)	0.14 (0.35)
Contributed hours of work	0.02 (0.12)	0.01 (0.11)	0.005 (0.07)	0.11 (0.31)	0.12 (0.33)
Helped in the classroom	0.004 (.06)	0.004 (0.07)	0.11 (0.31)	0.09 (0.29)	0.10 (0.30)
Helped in org of events	0.10 (0.29)	0.10 (0.30)	0.21 (0.41)	0.18 (0.09)	0.19 (0.39)

Table 3: GP characteristics by sample

Variable	Full Sample	T1	T2	T3	T4
GP population (mean)	6,452.31 (2613.90)	6267 (3389.59)	6,401.37 (2086.52)	6855.41 (2609.09)	6272.91 (2161.43)
GP hholds (mean)	1377.42 (511.27)	1337.55 (662.66)	1358.61 (404.05)	1474.37 (516.98)	1336.40 (413.61)
GP members (mean)	15.68 (5.65)	15.29 (6.88)	15.87 (4.77)	16.54 (5.98)	14.97 (4.63)
Mean Number of schools in GP	6.84 (3.37)	6.44 (3.71)	6.66 (3.33)	7.10 (3.27)	7.15 (3.12)
GP income (2012. Rs. '000)	1652 (1954)	1564 (2116)	1931 (2238)	1666 (1785)	1428 (1590)
GP expenditure (2012)	4401 (2375)	4336 (2708)	4440 (2206)	4690 (2624)	4124 (1848)
GP prop of expenditure on schools	0.02 (0.08)	0.04 (0.13)	0.02 (0.04)	0.01 (0.04)	0.01 (0.04)
Prop. Of GPs with CAC formed	0.84 (0.37)	0.88 (0.32)	0.80 (0.41)	0.84 (0.37)	0.85 (0.36)
Prop. Reporting meeting of CAC last year	0.71 (0.45)	0.77 (0.42)	0.71 (0.45)	0.68 (0.47)	0.69 (0.47)
Average number of CAC meetings last year	2.48 (2.35)	2.57 (2.03)	2.43 (2.39)	2.64 (2.87)	2.27 (1.97)
GP held a network meeting involving SDMCs	0.70 (0.46)	0.71 (0.46)	0.76 (0.43)	0.70 (0.46)	0.66 (0.48)
School Education Development Plans made	0.61 (0.49)	0.67 (0.47)	0.57 (0.50)	0.57 (0.50)	0.62 (0.49)
Number of CAC meetings organized by Prajayatna	2.54 (1.05)	2.83 (1.15)	2.27 (0.87)	1.75 (0.96)	--

Table 4: Cluster level data, Full sample, treatment and control clusters (T2, T3 and T4), by year

Variable	Full sample		T2		T3		Control (T4)	
	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13
Cluster schools	11.54	11.32	11.56	11.29	11.75	11.51	11.36	11.26
	(2.82)	(2.80)	(3.06)	(2.79)	(2.58)	(2.58)	(2.77)	(2.85)
Primary	733.62	661.02	775.81	690.88	748.15	688.94	705.67	633.45
enrollment	(396.67)	(352.67)	(442.40)	(379.20)	(417.45)	(368.25)	(356.42)	(332.91)
Teachers	45.62	41.38	46.68	42.47	45.96	43.23	45.4	40.20
	(15.29)	(13.66)	(17.25)	(14.86)	915.31)	(14.43)	(14.83)	(12.60)
CRP details								
Number of	16.07	17.18	15.99	16.88	15.48	16.88	16.24	17.39
years as CRP	(5.56)	(4.86)	(5.70)	(4.07)	(4.79)	(4.34)	(6.25)	(5.23)
Male	0.84	0.88	0.84	0.88	0.85	0.87	0.84	0.90
	(0.37)	(0.33)	(0.37)	(0.33)	(0.36)	(0.34)	(0.37)	(0.30)
Age	43.17	43.36	43.32	42.61	43.03	43.38	42.83	43.48
	(5.76)	(5.38)	(5.98)	(5.56)	(6.02)	(4.85)	(6.06)	(5.44)
Score in CRP	54.25	61.93	54.79	61.22	53.22	63.0	55.02	62.01
exam	(10.65)	(9.43)	(11.60)	(9.63)	(10.89)	(10.18)	(11.32)	(8.93)
CRC assets								
Building	0.54	0.53	0.45	0.49	0.59	0.63	0.57	0.47
	(0.50)	(0.50)	(0.50)	(0.50)	(0.49)	(0.49)	(0.50)	(0.50)
Sufficient	0.44	0.55	0.40	0.50	0.47	0.65	0.41	0.52
meeting space	(0.50)	(0.50)	(0.49)	(0.50)	(0.50)	(0.48)	(0.49)	(0.50)
Cabinet	0.5	0.75	0.47	0.72	0.52	0.81	0.53	0.73
	(0.50)	(0.43)	(0.50)	(0.45)	(0.50)	(0.39)	(0.50)	(0.45)
Computer	0	0.18	0	0.41	0	0.49	0	0.04
		(0.39)		(0.49)		(0.50)		(0.19)
Electricity	0.29	0.52	0.28	0.56	0.33	0.69	0.25	0.44
	(0.46)	(0.50)	(0.45)	(0.50)	(0.47)	(0.47)	(0.44)	(0.50)
TLM	0.41	0.73	0.35	0.69	0.44	0.84	0.40	0.71
	(0.49)	(0.44)	(0.48)	(0.46)	(0.50)	(0.37)	(0.49)	(0.46)

Table 5: Cluster level, maintenance of records (Full sample, treatment and control clusters, by year)

Variable	Full sample		T2		T3		Control	
	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13
Monthly sharing	0.85	0.95	0.89	0.97	0.83	0.93	0.83	0.96
meeting this year?	(0.36)	(0.21)	(0.32)	(0.18)	(0.38)	(0.26)	(0.38)	(0.19)
Number this year	1.73	7.62	1.71	7.56	1.82	7.34	1.66	7.67
	(0.60)	(1.37)	(0.63)	(1.13)	(0.62)	(1.25)	(0.58)	(1.46)
Are the following records maintained (in any form?)								
Enrollment	0.86	0.95	0.90	0.97	0.86	0.92	0.84	0.96
	(0.35)	(0.21)	(0.30)	(0.18)	(0.35)	(0.28)	(0.38)	(0.19)
Student absenteeism	0.06	0.51	0.03	0.85	0.07	0.53	0.08	0.53
(individual record)	(0.23)	(0.50)	(0.18)	(0.36)	(0.26)	(0.50)	(0.27)	(0.50)
Out of school children	0.30	0.86	0.23	0.90	0.35	0.85	0.32	0.89
	(0.46)	(0.34)	(0.42)	(0.30)	(0.50)	(0.36)	(0.47)	(0.31)
Individual student	0.05	0.50	0.02	0.49	0.06	0.51	0.08	0.53
academic performance	(0.22)	(0.50)	(0.15)	(0.50)	(0.24)	(0.50)	(0.27)	(0.50)
Number of teachers in	0.86	0.95	0.81	0.95	0.88	0.91	0.85	0.96
school	(0.35)	(0.23)	(0.40)	(0.21)	(0.32)	(0.29)	(0.36)	(0.20)
Individual teacher	0.09	0.56	0.06	0.58	0.07	0.57	0.16	0.57
absenteeism	(0.29)	(0.50)	(0.23)	(0.49)	(0.26)	(0.50)	(0.37)	(0.50)
SDMC member details	0.62	0.91	0.64	0.95	0.62	0.85	0.56	0.92
	(0.49)	(0.28)	(0.48)	(0.21)	(0.49)	(0.36)	(0.50)	(0.28)
Mid-day meal	0.59	0.88	0.51	0.90	0.62	0.85	0.57	0.89
	(0.49)	(0.32)	(0.50)	(0.30)	(0.49)	(0.36)	(0.50)	(0.31)
Proportion with computerized records								
Enrollment	0	0.11	0	0.26	0	0.27	0	0.02
		(0.31)		(0.44)		(0.45)		(0.15)
Out of school children	0	0.09	0	0.24	0	0.22	0	0.02
		(0.29)		(0.43)		(0.42)		(0.15)
Individual student	0	0.05	0	0.10	0	0.13	0	0.02
academic performance		(0.21)		(0.30)		(0.34)		(0.15)
Individual teacher	0	0.04	0	0.09	0	0.09	0	0.01
absenteeism		(0.19)		(0.29)		(0.29)		(0.11)

Table 6: OLS Regressions of SDMC and test scores at end-line (February 2013) on treatment indicators

Variables	SDMC quality				Test Scores			
	SDMC score	SDMC score	Log SDMC	Log SDMC	Lang score	Lang score	Math score	Math score
T1 (SDMC meetings)	2.00	2.23+	0.06	0.07*	2.76	1.64	1.38	1.44
	(1.53)	(1.34)	(0.04)	(0.04)	(1.89)	(1.18)	(2.30)	(1.90)
T2 (SGS)	-0.56	-0.83	-0.02	-0.02	-0.01	-0.67	-0.26	-0.54
	(1.65)	(1.41)	(0.05)	(0.04)	(2.10)	(1.24)	(2.34)	(1.89)
T3 (CRC)	-0.06	0.53	-0.01	0.01	0.52	-0.19	0.89	0.61
	(1.66)	(1.34)	(0.05)	(0.04)	(1.89)	(1.22)	(2.36)	(2.12)
Additional regressors	No	Yes	No	Yes	No	Yes	No	Yes
F statistic	1.18	8.59	1.84	8.44	0.89	54.18	0.21	13.84
(prob >F)	(0.32)	(0.00)	(0.14)	(0.00)	(0.44)	(0.00)	(0.89)	(0.00)

Note: Sample for SDMC regressions is set of SDMCs formed on or after 2006 (n=668). Sample for test scores is grade 5 students in 2012-13 (n=10,521). Standard errors (in parentheses) clustered at the level of the administrative cluster. Additional regressors are school average baseline test scores (August 2010), square in school size, proportion SC/ST students, village proportion of illiterate mothers, village proportion of agricultural labor households, village agricultural labor wage rates for men and women, indicator for whether the head master is SC/ST, head master age, number of classrooms, indicator for whether school has toilets and drinking water, indicator for school in main village, indicator for whether school is a lower primary school, indicator for whether the position of Gram Panchayat president is reserved for a woman, number of schools in the Gram Panchayat, and for baseline school quality (quartile of the state's educational ranking for schools in 2009-10). Test score regressions also include gender and caste of student and district fixed effects.

*Significant at 5% level +Significant at 10% level

Table 7: OLS and IV Regressions for Effect of Implementation on SDMC quality
Dependent Variable: (log) current SDMC management score

Variables	Distinguishing between meetings with old and new committee	
	OLS	IV (Instr: old SDMC quality interactions)
	(2)	(4)
Meetings – old SDMC	0.001	-0.01
	(0.004)	(0.01)
Meetings – current SDMC	0.006	0.013[+]
	(0.004)	(0.007)
T2	-0.02	-0.01
	(0.04)	(0.04)
T3	0.01	0.02
	(0.03)	(0.04)
Old SDMC quality	--	0.001
		(0.001)
Wald χ^2	6.85	168.00
(prob > χ^2)	(0.00)	(0.00)
(Regression F for OLS)		

Note: Standard errors (in parentheses) are clustered at the level of the administrative cluster. Additional regressors are listed in the note to Table 6. Sample size is 633.

[*]Significant at 5% level [+]Significant at 10% level

Table 8: OLS and IV Regressions on Survey test scores

	OLS	IV			
		exclude t1 from instrument set	include t1 in instrument test	Grade 5 test scores	Grade 4 test scores
	(1)	(2)	(3)	(4)	(5)
A.Language					
SDMC score	0.11*	0.50+	0.55*	0.59*	0.81*
	(0.05)	(0.29)	(0.29)	(0.30)	(0.35)
T1	1.19	0.58	--	--	--
	(1.15)	(1.29)			
T2	-0.52	-0.30	-0.59	-0.16	-1.45
	(1.24)	(1.57)	(1.43)	(1.63)	(1.69)
T3	-0.33	-0.81	-1.07	-0.15	-2.37
	(1.23)	(1.30)	(1.13)	(1.38)	(1.25)
July 2012 test	0.49*	0.49*	0.49*	0.56*	0.46*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Wald χ^2	F=51.12	1555.06	1526.24	1514.23	1219.77
(Prob > χ^2)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
B.Mathematics					
SDMC score	0.17*	0.51	0.57	0.51	0.88+
	(0.07)	(0.37)	(0.36)	(0.47)	(0.50)
T1	1.25	0.65	--	--	--
	(1.95)	(2.04)			
T2	-0.42	-0.57	-0.89	-1.12	-1.27
	(1.89)	(2.12)	(1.77)	(2.06)	(2.46)
T3	1.30	0.82	0.53	1.00	-0.04
	(2.11)	(2.12)	(1.83)	(2.26)	(2.28)
July 2012 test	0.26*	0.27*	0.28	0.26*	0.25*
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Wald χ^2	F= 9.36	314.24	307.32	239.26	193.11
(Prob > χ^2)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Note: Standard errors (in parentheses) clustered at the level of the administrative clusters. Other regressors listed in the note to table 6. Sample size is 9361. Instruments in IV regressions are SDMC_age and its square *Significant at 5% level +Significant at 10% level

Table 9: School scores – Evidence on accountability

Variable	Type of Language Test		Type of Mathematics Test	
	School	Survey	School	Survey
T1	2.24[+]	2.76	2.62[*]	1.38
	(1.36)	(1.89)	(1.34)	(2.30)
T2	-0.19	-0.01	1.00	-0.26
	(1.44)	(2.10)	(1.43)	(2.34)
T3	-0.85	0.52	-1.15	0.89
	(1.44)	(1.89)	(1.43)	(2.36)
F statistic	2.21	0.89	2.89	0.21
(Prob > F)	(0.09)	(0.44)	(0.04)	(0.89)

Note: Survey test scores reproduced from table 6. Clustered standard errors in parentheses.
[*]Significant at 5% level [+]Significant at 10% level

Table 10: Regression Estimates of the Impact of interventions on student attendance

	Full sample	Omit lowest 1% attendance	Omit lowest 5% attendance	
	(1)	(2)	(3)	(4)
T1	0.005	0.01	0.01	0.01
	(0.013)	(0.01)	(0.01)	(0.01)
T2	-0.003	-0.0001	-0.002	0.004
	(0.01)	(0.01)	(0.01	(0.01)
T3	-0.002	0.001	0.001	0.01
	(0.012)	(0.01)	(0.01)	(0.01)
Additional regressors	No	No	No	Yes
Sample size	11,896	11,783	11,326	10,695
Regression F	0.15	0.34	0.69	18.06
(Prob. > F)	(0.93)	(0.80)	(0.56)	(0.00)

Note: Standard errors, clustered by administrative cluster, in parentheses. Additional regressors are detailed in the text.

Table 11: Summary statistics on school funding from different sources, 2011-12

Funding source	Mean (across all sample schools)	Proportion of schools reporting
SDMC	801.71	0.28
	(4607.78)	(0.45)
Gram Panchayat	9,067.63	0.32
	(54,470.9)	(0.47)
Community Members	1,446.05	0.30
	(9344.72)	(0.46)
Central Government (Sarva Shiksha Abhiyan)	134,510.9	0.98
	(253,253.6)	(0.12)

Table 12: Regression Estimates of the Impact of interventions on the probability of receiving schools funds from different sources, 2011-12

	SDMC (1)	SDMC (2)	Gram Panchayat (3)	Community (4)
T1	0.29	0.24	0.19	0.40*
	(0.20)	(0.21)	(0.20)	(0.20)
T2	0.24	0.29	0.12	0.24
	(0.22)	(0.22)	(0.22)	(0.23)
T3	0.02	0.07	0.15	0.45*
	(0.22)	(0.23)	(0.21)	(0.21)
Additional regressors	No	Yes	Yes	Yes
Wald χ^2	3.13	58.62	78.77	73.44
(Prob > χ^2)	(0.37)	(0.00)	(0.00)	(0.00)

Note: Probit regressions; dependent variable is an indicator variable for whether the school received funds from the source in question during the 2011-12 school year. Standard errors, clustered by administrative cluster, in parentheses. Additional regressors are detailed in the text. Sample size is 714.
*Significant at 5% level.

Table 13: Regression Estimates of the Impact of interventions on mean teacher management scores for the school, endline

	(1)	(2)
T1	0.25	0.22
	(1.20)	(1.18)
T2	1.40	1.30
	(1.31)	(1.22)
T3	1.66	1.68
	(1.28)	(1.22)
Additional regressors	no	Yes
Regression F	0.88	5.04
(Prob > F)	(0.45)	(0.00)

Note: Standard errors, clustered by administrative cluster, in parentheses. Additional regressors are detailed in the text. Sample size is 714.
*Significant at 5% level.