

Testing Information Constraints on India's Largest Antipoverty Program

Martin Ravallion
Dominique van de Walle
Puja Dutta
Rinku Murgai

The World Bank
South Asia Region
Human Development and Economic Policy Units
&
Development Research Group
Human Development and Public Services Team
September 2013



Abstract

Public knowledge about India's ambitious Employment Guarantee Scheme is low in one of India's poorest states, Bihar, where participation is also unusually low. Is the solution simply to tell people their rights? Or does their lack of knowledge reflect deeper problems of poor people's agency and an unresponsive supply side? This paper reports on an information campaign that was designed and implemented in the form of an entertaining movie to inform people of their rights

under the scheme. In randomly-assigned villages, the movie brought significant gains in knowledge and more positive perceptions about the impact of the scheme. But objectively measured employment showed no gain on average, suggesting that the movie created a "groupthink," changing social perceptions about the scheme but not individual efficacy in accessing it. The paper concludes that awareness generation needs to go hand-in-hand with supply-side changes.

This paper is a product of the Human Development and the Economic Policy Units, South Asia Region; and the Human Development and Public Services Team, Development Research Group. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at rmurgai@worldbank.org, pduutta@worldbank.org and dvandewalle@worldbank.org.

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Testing Information Constraints on India's Largest Antipoverty Program

Martin Ravallion, Dominique van de Walle, Puja Dutta and Rinku Murgai¹

Keywords: Poverty; public awareness; information campaigns; workfare; randomized trials

JEL: D83, I38, O12, O17

Address for correspondence: mr1185@georgetown.edu

¹ Ravallion is with the Department of Economics, Georgetown University, and the NBER. Dutta, Murgai and van de Walle are with the World Bank. The authors are grateful to Sunai Consultancy Private Ltd and GfK Mode for support on the field work for this study. The movie was produced by the Institute for Participatory Practices (Praxis) with assistance from Soumya Kapoor. The authors are also grateful to the Rural Development Department, Government of Bihar, for providing insights into the challenges and ongoing initiatives in Bihar. Arthur Alik Lagrange and Maria Mini Jos provided very able research assistance. Useful comments were received from seminar participants at the Indian Statistical Institute, the Australian National University, the Norwegian School of Economics, the Stockholm Institute of Transition Economics and the World Bank. These are the views of the authors and do not necessarily represent those of their employers, including the World Bank or of any of its member countries.

1. Introduction

Incomplete information about their rights and take-up procedures are possible reasons why poor people do not fully access the public services due to them, as has been often observed in developing countries (World Bank, 2004). There has been much recent interest in the scope for using information-based interventions to improve service delivery and governance. The premise is that a lack of information is a decisive demand-side factor inhibiting successful participatory action by poor people to get the services to which they are entitled.

There is some support for this premise from past studies. Strömberg (2004) reports evidence that US antipoverty programs have worked better in places with greater access to radios. For India, Besley and Burgess (2003) found that the governments of states where newspaper circulation is greater are more responsive in their relief efforts to negative agricultural shocks. In Uganda, Reinikka and Svenson (2005) found significant impacts on schooling of a newspaper campaign. Access to a televised soap opera in Brazil was found by La Ferrara et al. (2012) to lower fertility, especially among poor women. Jensen and Oster (2009) found that access to television led to less domestic violence and lower fertility rates in India. Not all studies have been supportive. Banerjee et al. (2010) are less encouraging on the scope for using information interventions to improve the monitoring of education service providers in India.

However, incomplete information is clearly not the only reason why poor people do not take up their entitlements.² Nor is knowledge exogenous to the forces that create their poverty. What one considers one's "rights" in an Indian village (say) may depend more on what local officials and elites say than rather abstract central dictates in official legislation, far removed from the realities of daily life. Possibly people do not know their rights because there is no point knowing them when the reality of their lives does not admit those rights in practice. An information campaign will not then be sufficient for people to be willing and able to take action to get what they are due. The same factors that create poverty may make information about one's legal rights largely irrelevant to one's agency in accessing services.

The social psychology of an information campaign is clearly relevant here. We learn from psychology that information absorption is a selective, choice-based, process. If new public information about one's rights under the law is in an uncomfortable dissonance with long-

² Useful overviews of the arguments and evidence on factors relevant to the success of information campaigns can be found in Keefer and Khemani (2005) and (in the context of immunization campaigns) Cappelen et al., (2010).

standing beliefs based on the realities of one's experiences then that new information will be suppressed or simply ignored as some irrelevant fiction.³ The information campaign will fail.

Alternatively, the campaign may succeed in changing social perceptions relevant to the public program but not individual efficacy in accessing that program. In principle, a persuasive campaign may make one think differently, and more positively, about the local environment in the abstract, but not change the reality for anyone. The campaign creates a "groupthink."⁴ Each individual may instead come to think that he or she is an exception to the norm described by the information campaign. This distortion to beliefs may well come to be corrected in time through the sharing of experience via social interaction. But this will take time.

Among those antipoverty programs in the developing world for which these issues are salient, India's ambitious National Rural Employment Guarantee Act of 2005 (hereafter the "Act") surely stands out. The Act created a justiciable "right to work" for all rural households implemented through the National Rural Employment Guarantee Scheme—renamed the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in 2009. The scheme is huge, and it could well be the largest antipoverty program ever; according to the administrative data, over 50 million households in India participated in MGNREGS in 2009/10.⁵ The scheme promises 100 days of work per year to all rural households whose adults are willing to do unskilled manual labor at the statutory minimum wage notified for the program. Work is to be made available within 15 days to anyone who asks for it, failing which the state government is liable to pay an unemployment allowance. Open village meetings (*Gram Sabhas*) are supposed to identify suitable projects and local government institutions (*Gram Panchayats*) are given a central role in planning and implementation.

The most direct and obvious way this scheme tries to reduce poverty is by providing extra employment in rural areas on demand. This can entail both valuable income support for the chronically poor, and insurance against the many risks faced by India's rural population in their daily lives. Even those who do not normally need such work can benefit from knowing it is available. This can help underpin otherwise risky investments and come with efficiency gains given existing credit and labor market distortions.

³ In psychology this is known as the theory of cognitive dissonance, following Festinger (1957). On the economic implications of cognitive dissonance see Akerlof and Dickens (1982).

⁴ The idea of a groupthink is due to Janis (1972). For an economic model of how such erroneous beliefs held by groups of people can emerge and persist for some time see Bénabou (2013).

⁵ See Government of India website for MGNREGS (<http://nrnic.in>).

One would hope that MGNREGS—the country’s (and possibly the world’s) largest antipoverty program—worked well in India’s poorest states, where it is presumably needed most. Bihar is one of the poorest two or three of India’s larger states if not the poorest. In 2009/10, 55% of its rural population of 90 million lived below the poverty line.⁶ The state has had one of the lowest long-run trend rates of poverty reduction in India; indeed, there was virtually no long-run trend over 1960-2000 (Datt and Ravallion, 2002). Yet Bihar has the lowest participation rate in MGNREGS of any state. Figure 1 plots survey-based participation rates (the share of the population participating in the scheme) against poverty rates (the share of the population living below the poverty line) across states. Overall, there is virtually no correlation between the two variables. And Bihar stands out as having one of the lowest participation rates and highest poverty rates. Bihar’s participation rate is 0.22 below the regression line in Figure 1, making it a statistical outlier.⁷

So MGNREGS in Bihar poses a puzzle. (When referring to MGNREGS in Bihar we will abbreviate to “BREGS.”) The state has one of the highest poverty rates, but lowest participation rates in this massive antipoverty program. Also, Bihar’s participation rate is low conditional on its poverty rate. Essentially, the central government is willing to fund more employment on the scheme in Bihar, where it is surely needed, but the money is not flowing to workers.

One possibility is that a large share of the central government’s disbursements is being siphoned off somehow, before the money reaches workers. Dutta et al. (2013) address this question by using a household survey representative of rural Bihar (the same survey used in this paper and described further below) to estimate the gross wages and employment received by households. They then compare this with the total central disbursements to the state recorded in the official administrative data. The survey aggregates accounted for 80% of the employment claimed in the administrative data for 2008/09, rising to 86% in 2009/10. (The survey aggregates account for a slightly lower share of the administrative data on wages paid, namely 75% in the first year and 80% in the second.)

So, while there are signs of leakage, this does not explain the low participation rate of workers based on survey data. It appears that the center’s money is not reaching Bihar’s poor for some other reason. It may well be that people are too ill-informed about their rights, or of how to

⁶ Based on official Planning Commission poverty lines for 2009/10.

⁷ The t-statistic is -3.16 (using a White standard error).

demand them, for the scheme to function as intended in Bihar. In an attempt to minimize corruption, the scheme's designers made its take-up procedures rather complex, and possibly too complex for many potential participants. Low schooling attainments may impede learning about one's rights and self-efficacy; about half the adults in rural Bihar are illiterate, and it is an even higher proportion of those from poor families. Then intervention through a public information campaign makes sense. However, while public knowledge of program eligibility and take up procedures is a necessary condition for people to demand their rights, it is far from obvious that it is sufficient in this setting. Nor it is even obvious that the new information will be accepted.

Motivated by these observations, this paper aims to address the following questions about BREGS: How aware are people of their rights under the Act? Can their awareness be changed by a well-designed information intervention? If so, does that new knowledge generate better results—changes in BREGS's ability to reach poor people? Or does it only create new social perceptions that are largely divorced from reality?

To address these questions, we began with an extensive, state-wide, survey of rural households' knowledge about BREGS. On the basis of the results and complementary field work, we determined that public awareness of rights under the Act is low. To assess whether poor awareness is a causative factor in determining the program's low participation rate, we designed and implemented a randomized control trial (RCT) for an information intervention in the form of a high-quality and entertaining fictional movie, which aims to inform people of their rights under the Act. We were drawn to this intervention by our baseline survey results and qualitative field work, which suggested that for the information campaign to be successful, it had to meet several criteria: (i) it would need to engage viewers emotionally if it was to be relevant to them; (ii) it should influence public knowledge and not just that of participants; and (iii) it should be relatively easy to scale up if it proved effective in the trial. After showing the movie, we did a second round of surveys, returning to the same villages and households. The paper's key result is that, while the information intervention was successful in enhancing knowledge of entitlements under BREGS, it did not result in better program performance on average, although we do find gains for illiterate individuals. We infer that complementary actions are needed on the supply side to assure that the scheme's potential is realized.

The following section describes our data. We then turn to the questions raised above. Section 3 describes our information intervention, while Section 4 reports on its impacts, both on average and for selected strata. Section 5 concludes.

2. The survey data and summary statistics

We collected two rounds of data from 150 villages spread across rural Bihar. The first round (R1) was implemented between May and July of 2009 and the second (R2) during the same months one year later. These periods were chosen for being lean periods for agricultural work, and were thus expected to be peak periods for BREGS. The first of our survey periods witnessed severe floods during the monsoon (July – August of 2008) in some districts falling in the catchment area of the Kosi river. In contrast, rainfall was scanty during the 2009 monsoons and drought was declared in many districts.

A two-stage sampling design was followed, based on the 2001 Census list of villages. In the first stage, 150 villages were randomly selected from two strata, classified by high and low BREGS coverage based on administrative data for 2008/9. In the second stage, 20 households per village were randomly selected, drawing from three strata based on an initial listing of all village members and a few selected attributes. With numbers in parenthesis, the three strata were those with at least one member who had done public works in the last year (7), those with a member who had engaged in other (non-public works) casual work (7) and all other households (6). This stratified approach ensured that the sample included both scheme participants and households with likely participants. All results reported in the study are weighted with appropriate sample weights to reflect the sampling design and are representative for the state.

A household level survey collected information on a range of household level characteristics including demographics, asset ownership, consumption, employment and wages, political participation and social networks, as well as information on BREGS participation and process-related issues.

Individual level surveys were also administered to one male and one female member of each household, who were interviewed about their participation in BREGS, experience at the most recent BREGS worksite and knowledge and perceptions of the program, the village labor market and the role of women. We also collected data to calibrate a simplified individual-specific version of the Pearlin Mastery scale, which is a measure of the extent to which

individuals perceive themselves to be in control of factors that affect their lives.⁸ In addition, in each village, key informants were interviewed about physical and social infrastructure in the village, and access to government programs.

We supplemented these quantitative surveys with qualitative research in purposively selected villages in six districts in north and south Bihar (Gaya, Khaimur, Kishanganj, Muzaffarpur, Purnea and Saharsa) during February and August 2009.⁹ We drew on the qualitative work in designing both the intervention and follow-up surveys and in interpreting some of our quantitative findings.

The RCT for the information campaign was conducted in February-March 2010 in 40 villages randomly selected from the BREGS baseline sample of 150 villages. This took the form of a movie on BREGS rights and entitlements, tailored to Bihar's context and program guidelines. We return to the movie in Section 3.

The follow-up survey repeated the baseline survey, but with some extra questions. This was done 2-4 months after the intervention. As always, the choice of the follow-up time period is important. Given the timing of the seasons and the nature of the program, our expectation is that if the intervention had impact it should be evident within this time period, given that this coincided with the lean season, when demand for BREGS should be high. Around the time that many people would be in need of extra work, the intervention tells them how to go about getting that work. We can never rule out the possibility of longer lags or nonlinearities (such as due to threshold effects in knowledge), but we would still expect at least some impacts to be evident within this time period if learning about rights is the key constraint.

In total, 3,000 households and approximately 5,000 individuals were interviewed in both rounds. The balanced panel comprises 2,728 households and 3,749 individuals. The overall attrition rate for households between the two rounds was 8% and was not concentrated in any particular stratum. There were relatively few refusals; two-thirds of the attrition was because a household was away temporarily when the survey team visited the village. There is virtually no

⁸ The original scale consists of a 7-item scale developed by Pearlin et al. (1981). Each item is a statement about the respondent's perception of self, and they are asked how strongly they agree or disagree with each statement with four potential categories. We have transformed the answers into "yes/no," which proved to be a better approach in our setting, based on our field tests. Our scale is then created by adding up the answers and so ranges from 0 to 7.

⁹ The qualitative results are reported in Development Alternatives (2009), Indian Grameen Services (2009) and Sunai (2009). Dutta et al. (2013) provide summaries of the findings and their implications.

attrition effect for household-level BREGS participation or when estimating the impacts of the RCT for the information campaign.

In both the baseline and follow up surveys, individuals were asked whether they had heard of the scheme and if so, they were asked 12 questions aimed at testing their knowledge of the scheme's functioning, as well as of their rights under the Act. Table 1 provides the mean of correct responses for each of the questions by gender and survey round.¹⁰ We find knowledge of the details of the scheme to be low and even lower for women. Most men and three-quarters of women had heard about the program by R1, but many were unaware of their precise rights and entitlements under BREGS. As an overall measure of knowledge about the scheme's employment aspects we estimate a "work score" as the number of correct answers to the 8 employment related questions. The average "work score" is 2.6 for men and 1.5 for women out of a maximum of 8.

A second measure can be created for knowledge of the facilities and amenities that the scheme mandates must be provided at work sites (daycare, drinking water, shade and first aid kits). Respondents were asked to identify what facilities were supposed to be provided. The mean number of correct answers was 1.4 and 1.0 for men and women respectively out of a maximum of 4. We call this the "facilities score."

As can be seen in Table 1, knowledge of entitlements and BREGS procedures improved modestly over time. The average employment awareness score increased to 3.1 for men and 2.1 for women between Rounds 1 and 2; while the facilities score rose to 1.6 and 1.1, respectively.

Focusing on specific aspects of the scheme, knowledge is particularly low on entitlements such as the maximum time period of 15 days since demand within which work should be provided, the requirement to pay wages within two weeks, or the fact that contractors are not permitted. These are critical provisions of the scheme guidelines to ensure that rights are met. Knowledge that work needs to be demanded is higher (based on R2 information) but in practice it is not yet widespread. Only a quarter of male (and only 16% of female) workers in our sample had actually demanded work at the last worksite at which they worked in R1. The rest had obtained work through village leaders (including the Mukhiya¹¹), scheme functionaries

¹⁰ Note that the relevant means in Table 1 treat those who had not heard of the scheme as missing observations rather than including them as zeroes.

¹¹ The Mukhiya is the elected leader of the Gram Panchayat (the local self-government) and is responsible for the implementation of development programs at the panchayat level.

or contractors (who are specifically banned under the MGNREGS stipulations), or simply by turning up at the worksite when it opened. However, there was a marked increase in the proportion demanding work between the two survey rounds, particularly among female workers, for whom the proportion rose from 16% to 34%. (For men it rose from 25% to 40%.)

Awareness that access to employment under the scheme is a right for all rural households and not limited to specific groups or gender also increased between the two rounds, but is not yet universally known. In consequence, potential applicants can be excluded based on certain characteristics (e.g., widowhood, gender, old age, and disability) or a lack of documentation, such as having a Below Poverty Line (BPL) card which is used to identify target groups for many anti-poverty schemes in India but is expressly not required for participation in MGNREGS.

We ran various *ad hoc* regressions of the incidence of correct answers on individual, household and village attributes.¹² Details of the results summarized below are available in Dutta et al. (2013). We find certain factors to be consistently important. At the individual and household level, one can think of these as falling roughly into two categories of attributes — namely those that enhance a person’s knowledge and understanding, and those that render the information more relevant and meaningful to those individuals. In the first category, higher levels of education and higher scores on the Pearlin scale are dependably significant attributes that help process and retain information. Political connections (measured by whether the household is related to elected panchayat officials) create opportunities to access the work that one may not have otherwise and in that sense will also help people take on board information that may concern them.

Being from the Mahadalit caste (typically the most disadvantaged),¹³ from a household that has engaged in casual work before, or has suffered a shock, fall in the second category of attributes that make knowledge about BREGS vital to the household’s well-being. Male gender, given men’s responsibility as the main breadwinner, can also be seen to fit this category. Wealthier households (based on ownership of durable assets, housing quality, and land ownership) know less about the scheme, reflecting both that the scheme is less relevant to them,

¹² Tests for selection bias with the standard Heckman method using probits for individual awareness questions suggested that the people who said that they did not know about BREGS are not systematically different from those who said they did. The invest mills ratio was insignificant in all specifications.

¹³ In Bihar, Mahadalits, comprising the poorest and most disadvantaged among Scheduled Castes, have been notified as a separate sub-category by the state government.

and that this type of knowledge is not a local public good. There is considerable overlap between these covariates for knowledge and the characteristics we found to be significant determinants of participation in the scheme (Dutta et al., 2013). We also found greater knowledge among past participants, as one would expect. Knowledge and relevance to one's daily life go hand-in-hand.

In addition, a number of village characteristics which may reflect supply side issues, are significant covariates. High asset inequality is negatively associated with knowledge; having a Panchayat Bhawan (a building or room where the panchayat carries out its duties), certain characteristics of the Mukhiya such as if he lives in the village, increase knowledge while others such as the Mukhiya being a farmer/landowner reduce it.

3. The information intervention

The discussion above suggests that an information campaign would need to stress the fact that all adults are eligible for the scheme and that potential workers need to demand work in order to get it, in addition to providing information on guidelines for time-bound responses from the government on providing work or unemployment allowances, and for paying wages. Crucially, such a campaign needs to keep in mind the high levels of illiteracy in rural Bihar; in R1 we found that 56% of the heads of households are illiterate. There is also a need to specifically engage women and disadvantaged social groups to encourage their participation in the scheme.

We initially explored alternative modes of information campaigns through several open-ended focus group discussions with participants and non-participants, and men and women separately, in Nalanda and Patna districts of Bihar. In two focal groups information about the scheme was read out by facilitators, while in another the team showed short video clips on the scheme produced by the (national) Ministry of Rural Development and additionally provided information through facilitation and discussion. Prior to the focal groups we informally interviewed likely participants and then again after the meeting. The film format attracted more interest and discussion in the focus groups, and appeared to show greater potential for creating knowledge.

Based on these preliminary findings from our fieldwork, we produced (in collaboration with the NGO Praxis—the Institute for Participatory Practices) a short (25 minute) movie to explicitly convey information about rights and entitlements under BREGS. The movie was

tailored to Bihar's specific context and program guidelines. Professional actors performed in an entertaining and emotionally engaging story-based plot whose purpose was to provide information on how the scheme works, who can participate and how to go about participating. The main story line was centered on a temporary migrant worker returning to his village from the city to see his wife and young daughter. He learns that there is BREGS work available in the village, even though it is the lean season, so he can stay there with his family and friends rather than return to the city to find work. It was intended that the audience would identify strongly with the central characters. The film was disseminated between mid-February and mid-March 2010 in a randomly selected sub-sample of 40 out of the 150 villages that were surveyed in R1. (Section 2 discussed the timing of the intervention and follow-up surveys.) Compliance at the village level was complete. Since our 150 villages are drawn randomly from all villages in rural Bihar we can infer mean impacts of a village receiving a screening of the film for rural Bihar.

As a check on the randomization, we tested for differences in the sample means of the 75 village variables used in our analysis (including village means of household variables). The difference in sample means was only statistically significant at the 5% level for three out of 75 variables. (Some significant differences are to be expected by chance even when fully randomized.) The two samples are clearly well balanced.

In each village, the film was shown in two separate locations at different times over one or two days. At each location, the film was screened twice, followed by a question and answer session and distribution of one-page flyers that pictorially illustrated the main entitlements and processes under the scheme. On arriving in each village, efforts were made by the facilitators to announce and advertise the upcoming screenings in advance. Local officials such as the Mukhiya and Sarpanch, opposition leaders and local BREGS officials were invited to attend. The film was typically shown in common areas, such as an open ground, school building, or community hall. In 93% of the showings, the facilitators noted that the majority of people watched both screenings of the film. On average, about 365 people (38% women) attended either screening. In a third of the villages, the Mukhiya attended the show as did his assistant (the "mate"); the Panchayat Rozgar Sewak (PRS) attended in half the treatment villages and the local opposition leader did so in close to 60% of villages.¹⁴ People in the majority (89%) of shows reported that

¹⁴ The PRS is hired on contract by the state government for implementing the scheme.

the information was somewhat new and the movie was deemed by the facilitators to have generated a lot of discussion in 29% of the showings.

4. Impacts

We focus mainly on the single difference estimates of the impact of showing the movie in a household's village. Given the randomized assignment, the single difference estimates are unbiased in large samples. Small sample properties mean that there may be some dissimilarities between the randomized in and out villages. The difference-in difference (DD) estimator corrects for time-invariant selection bias that may be present due to any small sample bias. However, we found that the DD impact estimates were generally very similar to those found for the single difference; we comment on the exceptions below.

Table 2 reports the estimated impacts of the movie on knowledge of BREGS, for both men and women separately, as well as for the full sample. These are regression coefficients of knowledge on the village assignment of the movie.¹⁵ The dependent variable is a dummy variable taking the value 1 if the respondent was aware of BREGS or got the right answer to the relevant question and 0 otherwise. Thus the regression coefficient is the difference in the mean knowledge score between those who live in a village that was assigned the movie and those who live in a control village. The constant gives the mean knowledge score for the control group. Given that the village assignment is random by design, and there was complete compliance, the estimated difference in means is unbiased.

The movie had a significant impact on knowledge of the existence of BREGS for the sample as a whole. The magnitude of the effect is small (a 3% point gain), although that is not surprising as knowledge of the existence of BREGS was high to begin with. Also note that a larger and more significant effect on knowledge is found amongst women, who (as noted above) were less aware initially. The DD estimate was even larger for women.

The movie helped improve knowledge of employment related rights (as measured by the work score), for both men and women. For most questions, the impacts on men are larger than those on women, even though women had less information coming in to the information intervention.

¹⁵ The “svy” command in STATA was used to assure that the regression coefficient on the assignment dummy variable is equivalent to the difference in weighted means.

Large impacts are seen on knowledge about the number of days of work available (a 12% point increase), about the fact that work has to be provided within 15 days, that wages are to be paid within 2 weeks, that contractors are not permitted under the legislation, and about the prevailing BREGS wage rate; these impacts are all significant at the 1% level for men. Awareness of the provision for unemployment compensation if work cannot be provided also rose substantially due to the movie, with a larger effect for men (12%) than for women (8%). In contrast, there was no effect on awareness of the fact that BREGS work is not restricted to men, or to BPL households only. Awareness of these features improved considerably between R1 and R2, but there was no added impact of the movie.¹⁶

The impact of the movie on knowledge of worksite facilities is mixed, and not robust. There was no impact on either men or women on the facilities score. The fact that childcare is to be provided was little known in the control group, but rose for treatment villages, from 13% to 20%. However, the impact on knowledge about childcare was not robust to using the DD estimator, which showed no significant impact. Amongst women, but not men, there was a puzzling negative effect on knowledge that the scheme requires that drinking water and shade be provided at work sites. However, this too was not robust to using the DD estimator, which did not reveal any significant impact for these two items.

Finally, note the sizeable and significant effect of the movie on knowledge that work has to be demanded amongst men, but not women. 72% of men knew this in the control villages, rising to 80% with the movie. It is striking that there was no impact on knowledge that work has to be demanded for women, given that barely half of them knew this in the control villages. It may be that since women typically go to BREGS worksites with male family members or as part of groups, this is information they do not feel they need to retain.

Impacts on perceived and actual outcomes: Following the same estimation method as for Table 2, Table 3 presents estimates of the movie's impacts on a number of other outcome indicators. Rows 1 through 22 report on differences in perceptions about a number of factors, while the last four rows give impacts on objective aspects of how the scheme functioned post movie, namely participation, days of work and wages.

¹⁶ In R1, among women, 38% knew that both men and women were entitled to work on the scheme. The proportion responding correctly increased to 56% in the control group women. Similarly large improvements took place for the BPL related question as well.

The perceptions that BREGS projects have increased employment and led to a decline in migration all rose appreciably and significantly as a result of the movie for both genders. For example, the feeling that one can get work if one asks doubled from 9% for the control group. Similarly, the perceptions that one can get work on BREGS when one demands it, and of improvements in BREGS work opportunities for the household, were appreciably and significantly raised by the movie. The first increased from 43% for men in the control villages to close to 60% for those living in villages where the movie was shown, and from 35% to 51% for women. There was a doubling in the perception among both men and women that BREGS work opportunities increased between the two rounds.

In general, perceptions of improvements in village infrastructure, greater work opportunities and lower migration (not linking this to BREGS like the previous questions) became significantly more positive as a result of watching the movie, although not always for both genders. When asked whether migration has decreased in their village, 13% more men and 9% more women believed that it had in the treatment than in the control villages. Similarly, perceptions that village infrastructure has improved were significantly higher among women, though not for men, in the villages where the movie was shown.

There is a small effect on men's perception that women can choose BREGS projects, but no such effect for women. On the other hand, the movie has a strong and significant negative effect on the perception of men and women that the assets created have been useful to women, and for men only, that women participate in BREGS work. No other perceptions concerning women were affected by the movie.

However, there are no significant effects on actual or desired participation, wage rates or days worked (Table 3). While we find significant impacts of the movie on both awareness and perceptions of work opportunities (and infrastructure) we find no impacts on actual work or wages. Perceptions may well have been distorted by the movie; having watched the movie, people came to think that the scheme is working better for the village as a whole than their own objective experiences would suggest. This is suggestive of a "groupthink" induced by the movie.

We can exploit the panel data structure to further test for impacts of the movie on the various transitions in BREGS participation status. First, consider the group of "excess demanders" in R1, namely those who wanted BREGS work but did not get it. The movie did not enable them to take up work on the scheme in R2. We found that the regression coefficient of the

probability of participation among the R1 excess demanders on the dummy variable for whether the movie was shown is very close to (and not significantly different from) zero for both men and women.

Nor was there any impact on those who were neither actual participants nor excess demanders in R1. Among this group, the regression coefficient of the probability of either taking up work or becoming an excess demander on the dummy variable for whether the movie was shown was not significantly different from zero at the 10% level. We also tested whether the movie had any effect on the number of worksites that opened in the GP. There was no effect on either the level in R2 or the change from R1 to R2.

Learning and forgetting about the scheme: It is of interest to isolate the learning process by testing impacts of the movie on transitions from not knowing to knowing about BREGS. For this we need to bring in the baseline and panel. Table 4 looks at impacts for the subset of people who answered questions about BREGS correctly in R1 to see whether the movie reduced the incidence of “forgetting.” This is followed in the lower panel by impact estimates for the subset of those who answered incorrectly in R1 and are “learning” about the scheme.¹⁷

The movie had significant, mostly positive, effects on retaining information about some of the scheme’s stipulated rules over the two rounds. For example, the intervention significantly helped both men and women remember that BREGS offers 100 days of employment per household and at what wage rate. It enabled men to recall that an unemployment allowance is mandated when work is not provided and that contractors are not allowed. It reinforced the existence of the scheme for women who had heard about BREGS in R1. Women who knew in R1 that childcare facilities should be provided were reminded of this by the movie. On the other hand being from a village that showed the movie appears to have had a negative effect on men and women’s recollection that work sites must provide drinking water.¹⁸

The lower panel under “Learning” of Table 4 turns to the movie’s impacts on learning about aspects of the scheme that people had been ignorant of in R1. The movie significantly helped increase the incidence of correct answers for a majority of the 12 knowledge questions for both men and women. For example, 12% more individuals who are from movie villages than

¹⁷ These are selected sub-samples, so one should be cautious in drawing inferences for the population. Nonetheless, these tests are of obvious interest with regard to those sub-samples.

¹⁸ Note that it does not make sense to examine impacts on the composite indices for this subsample or the next, so they are left out of the table.

those from control villages learned about the allowed number of work days, 12% more women that participation does not require a BPL card, 13% more people about the wage rate, 8% more people about the prescribed time for wage payments and 15% more men that contractors are not permitted. Among mandated facilities, the movie only influenced learning about the child care facilities.

Impact heterogeneity: The movie could well have heterogeneous effects according to people's characteristics, including both those attributes that help one retain and digest information and those attributes that make that information more relevant to some individuals than others. We postulated that more marginalized groups—illiterate, with an underprivileged caste identity, and being less politically connected—would learn more from the movie. Illiteracy is an especially plausible constraint on access to all services in this setting, including BREGS. We also expected greater impacts for women, given their larger knowledge gaps in the baseline. We hypothesized that there might be an interaction effect with self-efficacy (as captured by the Pearlin scores), although we were less sure what one might expect (as one can make arguments either way about how self-efficacy would influence the gains from an information intervention).

Table 5 reports the results. Compared to those with primary education, illiterate individuals were more likely to feel that their knowledge of BREGS improved and that infrastructure has improved. The movie also resulted in 5.1 days extra employment for them than for the better educated, as well as Rs. 487 more in wages, or about Rs. 95 per day, which is almost exactly the average wage on BREGS in R2 (Dutta et al., 2013). While this can be considered a non-negligible gain, it is confined to current BREGS participants; the movie had no impact on participation by illiterate individuals. And five days of work is a small proportion of the excess demand for work on this scheme. In the individual survey we also asked how many days of extra work participants in BREGS would like; the average answer was 44 days in both survey rounds (Dutta et al., 2013).

Other conditioning variables do not reveal similar heterogeneity in the impacts on objective outcomes. Impacts on quite a few perceptions vary by caste, being significantly higher for Mahadalits in some but not all cases. There are also some differences between those who do and do not have political connections, with larger impacts for those with weaker political connections locally. A higher Pearlin score comes with bigger impacts on some perceptions; for example, going from Pearlin 1 to 2 increases the employment knowledge score by 41%.

5. Conclusions

India cannot reasonably claim success for its ambitious National Employment Guarantee Scheme unless the scheme works adequately where it is presumably needed most, namely in the country's poorest areas. We have focused on the role played by information in determining the scheme's performance in one of India's poorest states, Bihar. It is one thing to create rights under the law, but will that translate into rights on the ground, and better outcomes for poor people?

Our baseline survey indicates that while the vast majority of people in rural Bihar have heard of the scheme, there is little public awareness of even its most basic features. Few people understand that they have the right to request work. The fundamental principle of employment on demand is yet to sink in. Similarly, five years after the Act, people still know very little about other entitlements. And the overall participation rate is far lower than one would expect given the high incidence of poverty in rural Bihar, and associated demand for work on the scheme.

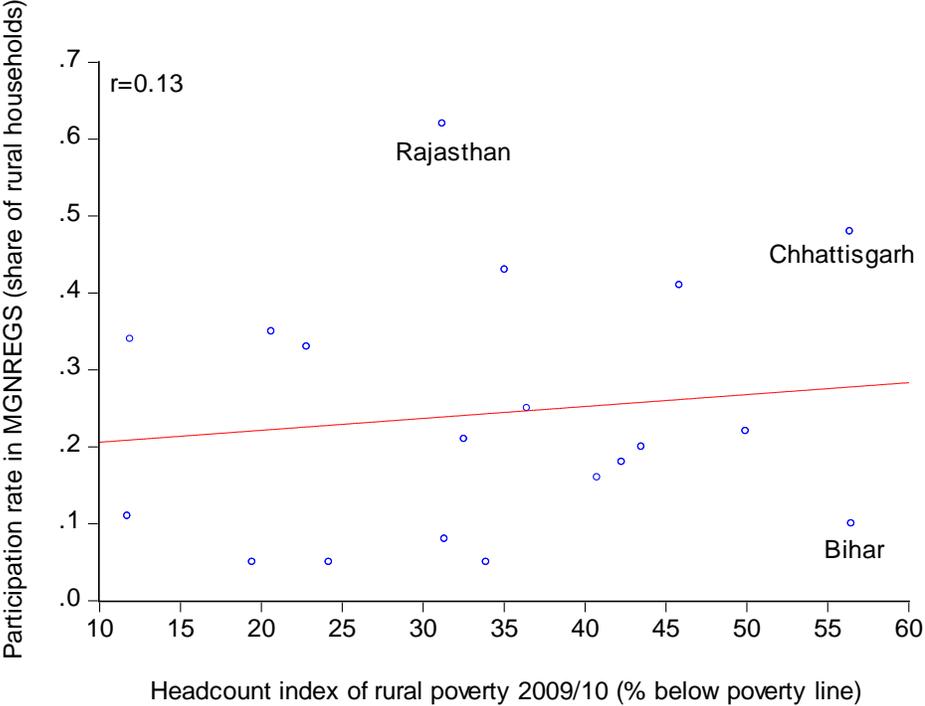
To test whether access to information is a key constraint on the scheme's performance, we used a high-quality fictional movie to inform people of their rights under the law—to help ensure local public knowledge of households' rights and of the scheme's rules, and to point to the scope for local monitoring and addressing grievances.

We find that the information campaign changes knowledge and beliefs about a public program in this setting. The movie significantly enhanced people's performance in tests about their rights and entitlements under the law. Perceptions of local processes related to the scheme also became significantly more positive for those who had access to the movie.

However, our results also caution that public awareness and positive perceptions are not sufficient for positive change. Indeed, our field trial indicates little discernible average impact on seeking and obtaining employment when needed. We do find a modest employment gain for illiterate participating individuals, though still far short of their desired employment. Learning one's rights in this setting is not the same thing as being empowered to demand those rights or have them met. The movie did not significantly change aggregate objective outcomes, but appears instead to have created a "groupthink" within the treatment villages—a distortion to widely-held beliefs. Collective perceptions of program efficacy became more positive, but this did not translate into actual efficacy at the individual level.

Our results show that public knowledge can be improved in this setting, but this is not the only factor limiting policy efficacy. Learning one's rights is only one step to successfully exercising those rights by making demands on those to whom one is subordinate. The information campaign needs to be combined with credible changes on the supply side, including more effective implementation of public disclosure and grievance processes, and more rapid responses to demand.

Figure 1: Participation rates in MGNREGS are only weakly correlated with the incidence of poverty across the states of India



Source: Dutta et al. (2012)

Table 1: Summary statistics on individuals' knowledge about BREGS rules

		Round 1				Round 2			
		Women		Men		Women		Men	
		Mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.
Heard	Has heard of BREGS	0.73	0.44	0.95	0.21	0.88	0.33	0.98	0.15
<i>Work score</i>		<i>1.51</i>	<i>1.52</i>	<i>2.60</i>	<i>1.88</i>	<i>2.10</i>	<i>1.56</i>	<i>3.14</i>	<i>1.83</i>
Days	Entitled to 100 or thinks 90 days	0.11	0.31	0.37	0.48	0.13	0.34	0.38	0.49
Gender	Both men & women can demand work	0.51	0.50	0.57	0.50	0.62	0.49	0.68	0.47
BPL	Non-BPL families can demand work	0.38	0.48	0.53	0.50	0.57	0.49	0.69	0.46
Work lag	Work is to be provided within 15 days	0.02	0.13	0.06	0.25	0.07	0.26	0.14	0.34
Unempl.	Knows about unemployment allowance	0.11	0.32	0.29	0.45	0.22	0.42	0.41	0.49
Wage rate	Knows wage rate	0.21	0.41	0.44	0.50	0.26	0.44	0.45	0.50
Wage lag	Wages to be paid within 2 weeks	0.08	0.27	0.12	0.32	0.10	0.30	0.14	0.35
Contractor	Contractors not allowed	0.11	0.32	0.24	0.43	0.13	0.34	0.27	0.44
<i>Facilities knowledge score</i>		<i>0.98</i>	<i>1.29</i>	<i>1.39</i>	<i>1.41</i>	<i>1.12</i>	<i>1.20</i>	<i>1.55</i>	<i>1.29</i>
Crèche	Knows of childcare facilities	0.19	0.39	0.19	0.39	0.12	0.32	0.18	0.38
Water	Knows of drinking water facilities	0.42	0.49	0.59	0.49	0.53	0.50	0.67	0.47
Shade	Knows of shade facilities	0.21	0.40	0.36	0.48	0.38	0.48	0.51	0.50
First aid	Knows of first aid facilities	0.18	0.38	0.26	0.44	0.10	0.30	0.20	0.40
Board	Knows of info board	--	--	--	--	0.01	0.11	0.06	0.23
Demand	Knows work has to be demanded	--	--	--	--	0.52	0.50	0.74	0.44

Notes: Household weighted. Approximate sample sizes: (a): “Has heard of BREGS”: N=2,800 for women; N=2300 for men; N=2000 for others; (b): “Has heard of BREGS”: N=2,000; Women R1: N=1,500; N=2,000 for others. Questions about the information board and having to demand work were not asked in R1. The “work score” is an overall measure of knowledge about the scheme’s employment aspects, based on the number of correct answers to the 8 employment related questions. The “facilities score” is an overall measure of awareness of the facilities and amenities that BREGS mandates must be provided at work sites (crèche, drinking water, shade and first aid kits). The stipulated 100 days of work is sometimes referred to as 3 months and hence interpreted by the public as 90 days, which we take to be an acceptable answer to the question.

Table 2: Estimates of the effect of the randomly assigned movie on knowledge of BREGS by gender

	Full Sample			Women			Men		
	Film in village	Constant	Obs	Film in village	Constant	Obs	Film in village	Constant	Obs
Heard	0.028**	0.915***	5012	0.047***	0.867***	2782	0.006	0.976***	2230
Work score	0.497***	2.465***	4655	0.368***	2.006***	2464	0.696***	2.977***	2191
Days	0.118***	0.221***	4597	0.117***	0.104***	2429	0.130***	0.351***	2168
Gender	-0.022	0.654***	4635	-0.007	0.622***	2452	-0.037	0.690***	2183
BPL	0.042*	0.615***	4636	0.048	0.559***	2453	0.039	0.676***	2183
Work lag	0.062***	0.088***	4629	0.038*	0.064***	2450	0.094***	0.114***	2179
Unempl.	0.094***	0.286***	4635	0.081**	0.201***	2451	0.117***	0.381***	2184
Wage rate	0.116***	0.322***	4637	0.082***	0.239***	2452	0.165***	0.413***	2185
Wage lag	0.048***	0.106***	4609	0.025	0.093***	2438	0.078***	0.122***	2171
Demand	0.049**	0.605***	4989	0.027	0.515***	2767	0.083***	0.717***	2222
Contractor	0.047**	0.184***	4634	-0.011	0.132***	2449	0.121***	0.242***	2185
Facilities score	0.02	1.317***	4655	-0.068	1.140***	2464	0.144	1.514***	2191
Crèche	0.075***	0.128***	4644	0.073***	0.100***	2458	0.081***	0.160***	2186
Water	-0.041*	0.604***	4645	-0.063*	0.546***	2458	-0.009	0.668***	2187
Shade	-0.026	0.445***	4644	-0.067**	0.394***	2457	0.027	0.502***	2187
First aid	0.016	0.142***	4642	-0.008	0.102***	2457	0.049	0.186***	2185
Board	0.023**	0.028***	4996	-0.004	0.014***	2773	0.058***	0.045***	2223

Note: Svy regressions using household weights and individual outcomes. Based on R2 data only. If an individual has not heard about BREGS, answers to other questions are coded as missing. *** p<0.01, ** p<0.05, * p<0.1, based on robust standard errors. Full definitions of the knowledge questions are given in Table 1.

Table 3: Estimates of the effect of the movie on perceptions and BREGS participation by gender

Dependent variable	Full R2 Sample			Women			Men		
	Film in village	Constant	N	Film in village	Constant	N	Film in village	Constant	N
1 Can influence wages	0.033	0.637***	4408	0.016	0.617***	2259	0.053	0.659***	2149
2 Benefits of participating in Gram Sabha	0.104***	0.152***	4356	0.096***	0.112***	2267	0.115***	0.197***	2089
3 Women participate in Gram Sabha	0.088***	0.367***	4507	0.087***	0.340***	2395	0.090**	0.398***	2112
4 Get work under BREGS when demands	0.085***	0.084***	4201	0.072***	0.069***	2125	0.100***	0.099***	2076
5 BREGS projects have increased employment	0.084***	0.176***	4173	0.067**	0.147***	2096	0.105***	0.206***	2077
6 BREGS decreased migration of labor	0.093***	0.140***	4071	0.087***	0.108***	2028	0.102***	0.172***	2043
7 BREGS work will be available next year	-0.032	0.563***	1906	-0.041	0.520***	831	-0.03	0.599***	1075
8 Women have the right to chose BREGS projects	0.047*	0.632***	3188	0.03	0.614***	1515	0.064*	0.649***	1673
9 Assets useful to women created under BREGS	-0.088***	0.832***	4013	-0.090***	0.844***	2039	-0.088***	0.821***	1974
10 Women work in BREGS projects	-0.072***	0.721***	4211	-0.045	0.717***	2162	-0.104***	0.726***	2049
11 Women treated well at BREGS worksite	0.003	0.981***	2602	-0.004	0.983***	1274	0.01	0.978***	1328
12 Women get work if they bring children to worksite	0.008	0.779***	2322	0.01	0.762***	1104	0.009	0.795***	1218
13 Distance women would be willing to go to work on BREGS worksite	9.18	61.741***	3063	36.132	61.053***	1584	-24.708	62.457***	1479
14 Women paid equal wages as men	0.021	0.807***	2454	0.004	0.824***	1198	0.038	0.790***	1256
15 Women of HH would like to work on BREGS	-0.013	0.454***	4929	-0.011	0.467***	2740	-0.015	0.437***	2189
16 Women of HH would be allowed to work on BREGS	-0.017	0.458***	4913	-0.019	0.473***	2724	-0.014	0.440***	2189
17 Knowledge of BREGS increased in last year in your family	0.163***	0.427***	4834	0.163***	0.348***	2637	0.166***	0.522***	2197
18 BREGS work opportunities improved in last year for your family	0.105***	0.119***	4798	0.110***	0.110***	2606	0.098***	0.129***	2192
19 Infrastructure improved in village	0.068***	0.611***	4888	0.087***	0.602***	2671	0.044	0.621***	2217
20 Work increased in village	0.063**	0.424***	4560	0.048	0.407***	2410	0.081**	0.444***	2150
21 Wage increased in village	0.018	0.755***	4627	0.017	0.740***	2472	0.018	0.771***	2155
22 Migration decreased in village	0.112***	0.184***	4506	0.094***	0.148***	2355	0.134***	0.225***	2151

23 BREGS participation post-movie	-0.01	0.054***	5012	-0.009	0.035***	2782	-0.009	0.078***	2230
24 BREGS days post movie	-1.232	4.690***	1047	-0.586	2.842***	430	-1.704	6.011***	617
25 BREGS wages post movie	-72.841	406.176***	1047	-52.766	261.668***	430	-88.228	509.487***	617
26 Desired participation in R2	-0.012	0.532***	5012	-0.021	0.446***	2782	0.002	0.641***	2230

Note: Svy regressions using weights and individual outcomes. Based on R2 data only. If individual has not heard about BREGS, answers to other questions are coded as missing.
 *** p<0.01, ** p<0.05, * p<0.1 based on robust standard errors.

Table 4: Effects of the movie on learning about BREGS

	Heard	Days	Gender	BPL	Work lag	Unempl.	Wage rate	Wage lag	Contractor
<i>PANEL A: "STILL RIGHT"</i>									
Full sample									
Film in village	0.028***	0.256***	-0.061	0.032	-0.038	0.132**	0.207***	0.109	0.127
Constant	0.946***	0.384***	0.676***	0.662***	0.313***	0.468***	0.407***	0.130***	0.274***
N	3100	717	1583	1346	149	605	937	252	459
Men									
Film in village	-0.002	0.246***	-0.075	0.071	-0.056	0.205***	0.207***	0.020	0.181*
Constant	0.990***	0.449***	0.689***	0.681***	0.389***	0.510***	0.460***	0.198***	0.361***
N	1511	548	838	819	106	449	620	157	307
Women									
Film in village	0.052***	0.285**	-0.046	-0.019	-0.013	-0.072	0.196**	0.192	0.011
Constant	0.907***	0.162***	0.663***	0.636***	0.102*	0.369***	0.309***	0.078**	0.108***
N	1589	169	745	527	43	156	317	95	152
<i>PANEL B: "LEARNING"</i>									
Full sample									
Film in village	0.022	0.115***	-0.009	0.069*	0.068***	0.106***	0.129***	0.082***	0.058*
Constant	0.789***	0.161***	0.644***	0.594***	0.084***	0.263***	0.302***	0.087***	0.167***
N	649	2167	1346	1577	2770	2318	1975	2650	2459
Men									
Film in village	-0.155	0.110**	0.030	-0.001	0.090***	0.100*	0.109**	0.098***	0.149***
Constant	0.941***	0.264***	0.662***	0.692***	0.105***	0.349***	0.398***	0.107***	0.198***
N	75	915	647	664	1373	1035	856	1315	1172
Women									
Film in village	0.049	0.120***	-0.044	0.117**	0.047	0.113**	0.140***	0.066**	-0.025
Constant	0.764***	0.091***	0.628***	0.525***	0.064***	0.195***	0.236***	0.068***	0.141***
N	574	1252	699	913	1397	1283	1119	1335	1287

Note: ‘Still right’ is defined as being aware in R1 and staying aware in R2. ‘Learning’ is defined as not being aware in R1 but answering correctly in R2. If an individual has not heard about BREGS, answers to other questions are coded as missing. *** p<0.01, ** p<0.05, * p<0.1 based on robust standard errors. Definitions of each knowledge question are given in Table 1.

Table 5: Tests for heterogeneity in the impacts of the movie

	Education Primary school vs. illiterate	s.e.	Pearlin 2 - 1	s.e.	Pearlin 3 - 1	s.e.	Caste 2 - 1	s.e.	Political 2- 1	s.e.	Male - female	s.e.
Heard	-0.037	0.023	0.028	0.033	0.013	0.039	0.019	0.022	-0.052	0.062	-0.040**	0.021
Work score	0.171	0.248	0.406*	0.232	0.367	0.304	0.298	0.296	-0.589	0.768	0.329*	0.182
Facilities score	0.225	0.185	0.082	0.178	0.13	0.237	0.038	0.18	-0.819*	0.48	0.212	0.135
Perceptions 1	-0.048	0.058	-0.03	0.063	0.013	0.086	-0.095	0.066	-0.172	0.153	0.038	0.047
Perceptions 2	-0.004	0.06	0.033	0.066	0.112	0.082	0.02	0.067	-0.305**	0.126	0.019	0.044
Perceptions 3	-0.08	0.064	0.104	0.066	0.154*	0.086	-0.104	0.07	-0.089	0.137	0.003	0.049
Perceptions 4	-0.048	0.042	0.019	0.039	0.101*	0.06	-0.109**	0.046	0.043	0.071	0.028	0.033
Perceptions 5	-0.018	0.059	0.048	0.058	0.180**	0.077	-0.101	0.062	0.021	0.097	0.038	0.044
Perceptions 6	0.036	0.061	0.024	0.052	-0.032	0.065	-0.093*	0.054	-0.009	0.088	0.015	0.043
Perceptions 7	-0.003	0.096	0.152	0.131	0.096	0.15	0.174*	0.105	0.018	0.212	0.012	0.079
Perceptions 8	-0.009	0.061	0.149*	0.077	0.105	0.101	0.014	0.073	-0.12	0.18	0.033	0.055
Perceptions 9	0.026	0.057	0.054	0.057	0.131**	0.063	0.024	0.054	-0.171	0.15	0.002	0.042
Perceptions 10	0.138**	0.059	-0.003	0.058	0.008	0.082	0.132**	0.06	-0.149	0.116	-0.059	0.046
Perceptions 11	0.014	0.016	0.021	0.03	0.035	0.031	-0.012	0.011	0.03	0.077	0.013	0.015
Perceptions 12	0.049	0.069	-0.031	0.076	-0.034	0.11	-0.185***	0.055	-0.374***	0.101	-0.001	0.056
Perceptions 14	0.102	0.068	0.014	0.07	0.067	0.087	0.186**	0.075	-0.318***	0.117	0.033	0.05
Perceptions 15	-0.006	0.051	0.041	0.063	-0.014	0.084	0.072	0.057	-0.061	0.14	-0.004	0.048
Perceptions 16	0.001	0.051	0.059	0.063	0.026	0.085	0.019	0.056	-0.064	0.141	0.006	0.048
Perceptions 17	-0.109*	0.06	0.069	0.065	0.051	0.085	-0.072	0.066	-0.220*	0.127	0.003	0.046
Perceptions 18	0.042	0.053	-0.003	0.045	0.022	0.065	-0.145***	0.052	-0.327***	0.121	-0.011	0.038
Perceptions 19	-0.140**	0.06	-0.154***	0.059	-0.170**	0.083	-0.211***	0.063	-0.026	0.139	-0.043	0.046
Perceptions 20	-0.086	0.065	0.129*	0.067	0.163*	0.088	-0.121*	0.068	0.028	0.122	0.033	0.049
Perceptions 21	-0.08	0.051	-0.013	0.048	0.054	0.075	-0.132**	0.055	0.024	0.127	0	0.041
Perceptions 22	-0.051	0.061	0.088*	0.051	0.057	0.07	-0.183***	0.058	0.003	0.112	0.04	0.044
NREG part. post-movie	-0.021	0.019	-0.01	0.034	0.023	0.037	-0.025	0.041	0	0.052	0	0.021

	Education Primary school vs. illiterate	s.e.	Pearlin 2 - 1	s.e.	Pearlin 3 - 1	s.e.	Caste 2 - 1	s.e.	Political 2- 1	s.e.	Male - female	s.e.
NREG days post movie	-5.098**	2.138	-0.23	2.098	1.293	2.297	-0.546	1.873	-1.529	1.371	-1.118	1.535
NREG wages post movie	-487.30**	204.172	35.65	207.564	169.881	220.525	-37.958	183.366	-113.54	135.939	-35.462	147.347
NREG wages received post movie	-106.035	148.744	107.668	192.594	237.912	210.289	168.739	157.837	-106.74	130.428	43.038	133.216
Desired participation R2	-0.016	0.061	0.027	0.063	-0.085	0.084	0.026	0.059	0.016	0.139	0.023	0.047

Note: Estimated using a single difference on R2 data. Estimates give the difference in estimates between the specified groups. Definitions of the perception variables are given in the box below. The stratifications are as follows: education: 1= illiterate, 2 =literate and up to class5 pass, 3=more than primary; caste: 1 = Mahadalit, 2 =all others; Pearlin: 1=scale<3, 2=scale=3, 4 or 5, 3 = scale>5;political: 1=person voted, if close to Mukhiya or close to ward member, 2= none of those is true.

Codes for Perceptions

1	Can influence wages	12	Women get work if they bring children to worksite
2	Benefit of participating in Gram Sabha	13	Distance women would be willing work on BREGS worksite
3	Women participate in Gram Sabha	14	Women paid equal wages as men
4	Gets work under BREGS when demand	15	Women of HH would like to work on BREGS
5	BREGS projects have increased employment	16	Women of HH would be allowed to work on BREGS
6	BREGS decreased migration of labor	17	Knowledge of BREGS increased in last year in your family
7	BREGS work will be available next year in village	18	BREGS work opportunities improved in last year in your family
8	Women have the right to chose BREGS projects	19	Infrastructure improved in village
9	Assets useful to women created under BREGS	20	Work increased in village
10	Women work in BREGS projects	21	Wage increased in village
11	Women treated well at BREGS worksite	22	Migration decreased in village

References

- Akerlof, George and William Dickens, 1982, "The Economic Consequences of Cognitive Dissonance," *American Economic Review* 72(3): 307-319.
- Banerjee, Abhijit, Rukmini Banerji, Esther Duflo, Rachel Glennerster, and Stuti Khemani, 2010, "Pitfalls of Participatory Programs: Evidence from a Randomized Evaluation in Education in India," *American Economic Journal: Economic Policy* 2(1): 1-30.
- Bénabou, Roland, 2013, "Groupthink: Collective Delusions in Organizations and Markets," *Review of Economic Studies* 80: 429–462.
- Besley, Timothy and Robin Burgess, 2003, "The Political Economy of Government Responsiveness: Theory and Evidence from India," *Quarterly Journal of Economics* 117(4):1415-51.
- Cappelen, Alexander, Ottar Mæstad and Bertil Tungodden, 2010, "Demand for Childhood Vaccination—Insights from Behavioral Economics," *Forum for Development Studies* 37(3): 349–364.
- Datt, Gaurav and Martin Ravallion, 2002, "Has India's Post-Reform Economic Growth Left the Poor Behind," *Journal of Economic Perspectives* 16(3): 89-108.
- Development Alternatives, 2009, "Report on Scoping Study for Design and Development of Alternative Implementation Model(s) on NREGS," Background note prepared for the BREGS study.
- Drèze, Jean and Reetika Khera, 2011, "Employment Guarantee and the Right to Work," in Reetika Khera (ed.) *The Battle for Employment Guarantee*, New Delhi: Oxford University Press.
- Dutta, Puja, Rinku Murgai, Martin Ravallion and Dominique van de Walle, 2012, "Does India's Employment Guarantee Scheme Guarantee Employment?" *Economic and Political Weekly* 48 (April 21): 55-64.
- _____, _____, _____ and _____, 2013, *Rozgar Guarantee? Challenges of Fighting Poverty in a Poor State of India*, World Bank Report.
- Festinger, Leon, 1957, *A Theory Of Cognitive Dissonance*, Evanston, Illinois: Row Peterson.

- Government of India, Office of the Registrar General & Census Commissioner, 2006, "Population Projections for India and States 2001-2026," Report of the Technical Group on Population Projections Constituted By the National Commission on Population.
- Indian Grameen Services, 2010, "Exploring Shelf of Works for Flood Affected Area of North Bihar," Report prepared for the Rural Development Department, Government of Bihar and the World Bank.
- Indian Grameen Services, 2009, "Report on Scoping Study for Design and Development of Alternative Implementation Model(s) on NREGS and SGSY," Background note prepared for the BREGS study.
- Janis, Irving, 1972, *Victims of Groupthink: Psychological Studies of Policy Decisions and Fiascoes*, Boston, MA: Houghton Mifflin Company.
- Jensen, Robert and Emily Oster, 2009, "The Power of TV: Cable Television and Women's Status in India," *Quarterly Journal of Economics* 124(3): 1057-1094.
- Keefer, Philip and Stuti Khemani, 2005, "Democracy, Public Expenditures, and the Poor: Understanding Political Incentives for Providing Public Services," *World Bank Research Observer* 20 (1): 1-28.
- La Ferrara, Eliana, Alberto Chong and Suzanne Duryea, 2012, "Soap Operas and Fertility: Evidence from Brazil," *American Economic Journal: Applied Economics* 4(4): 1-31.
- Mathew, George and Nirmala Buch, 2000, *Status of Panchayati Raj in the States and Union Territories of India 2000*, Institute of Social Studies, New Delhi.
- Ministry of Rural Development, 2011, "Reforms in MGNREGA Implementation," Ministry of Rural Development, Delhi, India.
- National Consortium of Civil Society Organizations, 2009, "NREGA Reforms: Building Rural India," First Annual Report of the National Consortium of Civil Society Organizations on NREGA.
- National Consortium of Civil Society Organizations, 2011, "MGNREGA: Opportunities, Challenges and the Road Ahead," Second Report of the National Consortium of Civil Society Organizations on MGNREGA.
- Pearlin, Leonard, Elizabeth Menaghan, Morton Lieberman and Joseph Mullan, 1981, "The Stress Process," *Journal of Health and Social Behavior* 22(4): 337-356.

- Reinikka, Ritva and Jakob Svensson, 2005, "Fighting Corruption to Improve Schooling: Evidence from a Newspaper Campaign in Uganda," *Journal of the European Economic Association* 3(2/3): 259-267, Papers and Proceedings of the Nineteenth Annual Congress of the European Economic Association.
- Strömberg, David, 2004. "Radio's Impact on New Deal Spending," *Quarterly Journal of Economics* 119 (1): 189-221
- Sunai Consultancy Pvt. Ltd., 2009, "Process Qualitative Observation Report, Feb-Mar 2009, four blocks of Muzaffarpur and Saharsa districts of Bihar," Background note prepared for the BREGS study.
- World Bank, 2004, *World Development Report: Making Services Work for Poor People*, Washington DC: World Bank.