Poverty and empowerment impacts of the Bihar Rural Livelihoods Project: Evidence from a Mixed-Methods Cluster-Randomized Trial

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**Abstract:** This study documents the impact of a government-sponsored livelihoods project using a mixed methods approach within a cluster-randomized trial. Key features of the project were the formation of women’s self-help groups, and the provision of low-cost credit through these groups. The intervention led to a dramatic increase in self-help group membership and take-up of credit through these groups, and a corresponding decline in the use of informal credit. A reduction in average informal lending interest rates was also observed. Two years after initiation of the program, significant positive impacts on asset ownership among landless households were apparent. Impacts on various indicators of women’s empowerment were mixed, and showed no clear direction when aggregated, nor was there any impact on consumption value. Given the reduction in debt service costs achieved both directly through substitution into lower-cost sources of credit and the reduction in informal interest rates, impacts of the intervention on household welfare are expected to continue to accrue over time.

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# Abbreviations and Acronyms

SHG Self-help group

IFPRI International Food Policy Research Institute

DPIP Andhra Pradesh District Poverty Initiative Project

MFI Microfinance institution

RCT Randomized controlled trial

VO Village organization

CLF Cluster level federation

GoI Government of India

CM Community mobilizers

CRP Community resource person

AC Area coordinator

CC Community coordinator

ANCOVA Analysis of covariance

PRI *Panchayati Raj* institution

SC/ST Scheduled Caste/Scheduled Tribe

NRLM National Rural Livelihoods Mission

BRLPS Bihar Rural Livelihoods Promotion Society

ICC Intra-Cluster Correlation

# Introduction

Livelihoods projects have been an important modality of development assistance in many parts of the developing world for at least two decades. Such projects aim to reach out to the rural poor and link them with sustainable livelihoods opportunities, and are in place or proposed in India, Afghanistan, Bangladesh, Sri Lanka, Malawi, Madagascar, and Zambia. One such project is the Bihar Rural Livelihoods Project, initiated by the Government of Bihar in 2006. This program fell under the ambit of the National Rural Livelihoods Mission (NRLM) of India, which was launched by the (national) Ministry of Rural Development in 2011.[[2]](#footnote-2) The NRLM aimed to build grassroots institutions of the poor, and to use these as a platform through which to link the poor to financial institutions and livelihoods opportunities at a total cost of over 5 billion USD.[[3]](#footnote-3) Under the framework of the NRLM, various states in India have established their own livelihoods promotion societies to implement these larger goals.

As implemented in India, these programs build on the platform of small (10-15 member) women’s Self-Help Groups (SHGs). Through these groups, members can access low-cost credit, learn about new income-generating opportunities, and acquire basic literacy and livelihoods training. In these programs, SHGs are federated into village organizations (VOs) and further into cluster level federations (CLFs), each of which aim to facilitate collective action and political participation by the poor, and provide a structure for linkages to financial services and government entitlement programs.

While livelihoods projects have often been described as an exemplary method of reducing poverty and empowering women, only a few independent evaluations of such programs, in India or elsewhere, exist. Only one published RCT of which we are aware evaluates the impacts of an SHG-based livelihoods intervention (Desai and Joshi, 2014). The authors evaluated the impact of the *Integrated Rural Livelihoods Program*, implemented by SEWA in a rural district of Rajasthan, India. This program formed SHGs and provided vocational and other training through these. Women were encouraged to contribute savings to a revolving fund managed by the SHG and were linked to formal banks, but lending capital was not directly provided. After two years of exposure to the program, Desai and Joshi find that women report being more likely to participate in household decisions and civic life. They also report some evidence that non-farm employment is more likely among SHG members, but find no impact on income or consumption levels.

Two previous large-scale, government-implemented livelihoods programs similar in design to the subject of the present evaluation were the Andhra Pradesh District Poverty Initiative Project (AP-DPIP), and the Madhya Pradesh District Poverty Initiative Project (MP-DPIP). Both of these projects targeted large segments of the poor and provided significant capital infusions to SHGs for use in a revolving loan fund. Deininger and Liu (2013) evaluated the AP-DPIP using propensity score matching with two rounds of panel data and controls drawn from a random sample of mandals[[4]](#footnote-4) where the project had not yet entered. They find small but positive impacts with long-term program exposure on consumption, nutritional intake, and asset accumulation. Kumar (2007) evaluated the impact of the Madhya Pradesh District Poverty Initiative Project (DPIP) on governance and empowerment by comparing villages in MP with neighboring villages in Uttar Pradesh using a difference in differences approach. She finds that DPIP had a positive impact on information flows and political behavior, and in particular that DPIP villages were better able to target resources to disadvantaged groups. Cassini, Vandewalle and Wahhaj (2017) document collective actions for public goods provision taken by SHGs mobilized by an NGO with the goal of providing financial intermediation. They use exogenous variation in the formation of SHGs over time to show a positive impact of such actions on the responsiveness of local government officials. There has been a fair amount of qualitative work on livelihoods projects, but this has in most cases been done by consultants to the project so cannot be considered objective. One of the few independent studies is by Powis (2003), who finds that these programs have encouraged the emergence of local leaders who create parallel structures of authority to local governments.

Here we report the results of a mixed methods evaluation of the Bihar Rural Livelihoods Project, also known as *Jeevika* – consisting of quantitative analysis of a cluster-randomized controlled trial (cRCT), and significant qualitative work. Similar to both the Madhya Pradesh District Poverty Initiative Project and the Uttar Pradesh District Poverty Initiative Project, Jeevika was a large-scale public program that targeted poor women in rural areas, forming SHGs and VOs, and using these institutions as a platform for training, linkages to formal sector financial institutions, and the provision of lending capital. While the program targeted women from scheduled tribes and castes, and the landless, any adult woman residing in an area where the program was active was able to join. Jeevika was implemented in two phases; Phase I began in 2006 and Phase II began in 2011. The quantitative data is drawn from villages entered by the project under Phase II. The qualitative analysis examines villages from both Phase I and Phase II, and discusses the differences in outcomes between these two periods.

Bihar is the third largest, poorest, and most densely populated state in India, and its population includes a sixth of India’s poor. Bihar has done worse than other Indian states on reducing poverty incidence over the long term (noted for 1960 – 2000, in Datt and Ravallion, 2002). Bihar is also similar culturally and economically to other states in India’s Gangetic belt - including Uttar Pradesh, Eastern West Bengal, Odisha, and Jharkhand. These states have a combined rural population of approximately 300 million that were targeted by the National Rural Livelihoods Mission. Therefore, findings from this evaluation are informative not only for Bihar but for the entire Gangetic belt and for the national expansion of livelihoods projects in India.

During the period covered by this evaluation, *Jeevika*’s activities included SHG and VO formation, provision of low-cost credit, and delivery of a curriculum covering women’s empowerment, basic literacy and numeracy to SHG members. Other development interventions and livelihoods training were planned for delivery at a later stage of project implementation. The timing of project activities relative to the evaluation implies the limitation that we are not able to evaluate the impact of the full range of interventions typically included in a livelihoods project through this study. On the other hand, the opportunity to evaluate a smaller package of interventions is advantageous from the perspective of being able to attribute impacts to these interventions, as opposed to the more complex bundle of a typical livelihoods project. As such, this evaluation contributes to the substantial recent literature estimating household-level impacts of access to group-based lending (Angelucci et al, 2015; Attanasio et al., 2015; Berg et al., 2015; Banerjee et al., 2015; Crepon et al., 2015). In general, this literature shows that even when an expansion in access to credit results in households taking on more overall debt, impacts can be quite limited in the short to medium run (Banerjee, Karlan and Zinman, 2015). While it is common to see shifts in livelihood activities, typically away from wage labor and toward self-employment, total household income is not generally affected, at least in the short-term, through credit access. Similarly, impacts on overall consumption are rare, while reallocation away from “discretionary” spending (temptation goods, entertainment, and celebrations) is more commonly observed.

The pre-analysis plan registered for this study,[[5]](#footnote-5) included as Appendix A of this report, specified a total of 38 household-level outcomes in the following areas: self-help group participation, microcredit loan terms and usage, livelihood opportunities, asset position, access to other government schemes, women’s empowerment, consumption, and subjective well-being. The plan also noted 3 village-level outcome variables on collective action and mutual support.

This report begins with an overview of the intervention structure, theory of change, and research hypothesis followed by a discussion of the study site and timeline. We then continue with a discussion of the evaluation design and implementation, methods of analysis, and key results. The report concludes with a reflection on the internal and external validity of the evaluation, and policy implications.

# Intervention, theory of change, and research hypothesis

Engaging the poor in livelihoods programs through self-help groups is an important and widely used intervention. Over five billion dollars have been committed to such projects by the Government of India and the World Bank, and similar initiatives are planned and ongoing in Sub-Saharan Africa. Despite this, at the start of this project, there had been no randomized impact evaluation of a large-scale livelihoods project. To fill this gap, researchers at the World Bank, the University of Maryland (now IFPRI) and Wesleyan University (now Florida State University), in cooperation with the Bihar Rural Livelihoods Promotion Society, undertook a randomized evaluation of the Bihar Rural Livelihoods Project, also known as Jeevika. Jeevika was expected to reach 590,000 households across Bihar over a six-year period (World Bank, 2007). The project began in 18 administrative blocks in 6 districts in 2006, and in 2010 began an expansion into 37 new blocks in 9 districts, providing an opportunity to rigorously evaluate this flagship project. Jeevika’s ultimate goal is to mobilize 15 million women through participation in 1.1 million SHGs by 2022[[6]](#footnote-6).

The intervention involves forming SHGs of 10 to 15 women, who are expected to attend weekly meetings during which a curriculum on women’s empowerment and basic literacy and numeracy is delivered. Members are asked to contribute savings each week to a group account. After meeting for at least three months and demonstrating consistent weekly savings, SHGs receive access to lending capital of 50,000 Rs (equivalent to approximately 875 USD) through the VO, which has a formal bank account. Members are able to borrow from this pool at an interest rate of 2 percent per month. This rate was less than half the prevailing interest rate in the informal sector at the start of the project. Loans were provided to individual members at SHG meetings, or the members could accompany a signing officer of the group to the bank to access cash between meetings.

The primary goal of the program during the first two years of implementation is to facilitate financial inclusion (particularly access to low-cost credit), under the assumption that such access will allow the retirement of high-cost debt and thus enable the improvement of livelihoods. As the credit intervention and training were the only program components that had been rolled out by the time of follow-up data collection for this study, a large part of this evaluation focuses on credit access and credit market outcomes. Access to lower cost credit is expected to allow accumulation of productive assets, improve food security, and ultimately increase household consumption levels. Given the large infusion of lending capital, the program also has the potential to impact local credit markets. This constitutes an additional, indirect channel through which households may realize savings on the cost of debt and thus increase consumption levels. As the intervention also had an explicit goal of empowering women, we consider as well the impact of the program on women’s mobility, decision-making role within the household, capacity for collective action, and aspirations.

We classify the hypotheses tested through the quantitative impact evaluation as direct impacts, indirect impacts, and downstream impacts of Jeevika. Primary impacts are first order, including outcomes such as participation in a self-help group and borrowing from a self-help group. One or more direct impacts are necessary but not sufficient for the intervention to lead to indirect effects on informal credit markets. Changes in downstream outcomes (such as wealth, household consumption and asset holdings, women’s empowerment) may follow from either primary or secondary impacts above. To be more explicit, we hypothesize that having access to the Jeevika program will increase household participation in SHGs, and increase their borrowing from SHGs. We further hypothesize that this should allow households to substitute away from informal credit, thereby reducing amounts borrowed from informal sources and potentially also interest rates on loans from informal sources. Given these impacts on household borrowing, we expect households to be able to increase their holding of productive assets and perhaps move into self-employment from labor, and ultimately increase their income and consumption. We also hypothesize that Jeevika will lead to increased empowerment of women – measured through indices of freedom of movement, household decision making, and collective action. Figure 1 presents this theory of change as a diagram. Specific hypotheses are listed in the Pre-Analysis Plan (Appendix A).

Qualitative data collection and analysis were conducted alongside the quantitative evaluation to provide a deeper understanding of the mechanisms underlying impacts that we observe. This is intended to help us better understand the *processes of change* with respect to culture and gender that resulted in observed social impacts. Such a focus sheds light on the sociological underpinnings of behavior and the negotiated relational processes at the household and community levels.

**Figure 1.** Theory of change diagram

*Impact on household-level welfare*

* Increase in consumption value, assets
* Greater access to public entitlements

*Intervention*

* Self-help group formation
* Provision of low-cost credit
* Curriculum on women’s empowerment and basic literacy

*Participation*:

* SHG members participate in meetings

*Use of credit*

* Productive investments
* Consumption smoothing
* Replacement of higher-cost debt

*Assumptions*

1. Credit offered through SHGs is affordable and useful to members

*Assumptions*

1. Credit is used for purposes with the potential to improve household welfare

*Assumptions*

1. SHGs substitute for informal lenders as a source of credit

*Assumptions*

1. Money saved through loan payments is used for consumption or asset accumulation

*Local credit markets*

* Informal borrowing rates decline
* Uncompetitive lenders exit market

*Impact on women’s empowerment*

* Women’s mobility, ability to work outside the home are increased
* Women’s voice within the household is strengthened
* Women’s capacity for collective action is improved
* Women have heightened aspirations

*Assumptions*

1. Empowerment curriculum and social networks created through SHG participation improve capacity for collective action, support assertion of voice within the household, and encourage higher aspirations among group members

*Assumptions*

1. SHG offers sufficient value to target population
2. Target population has the time and autonomy necessary to attend SHG meetings

*Assumptions*

1. Access to resources improves women’s bargaining power within the household

*Assumptions*

1. Credit is used directly for consumption, for asset accumulation, or for productive assets that increase consumption

*Assumptions*

1. Collective action improves access to entitlements

*Credit take-up*:

* SHG members utilize low cost credit

# Background and context

Bihar is one of India’s poorest states, and lags considerably behind the national average GDP per capita for India. (NABARD, 2014) According to a 2005 report by the World Bank, the issues faced by the state are “enormous” because of “persistent poverty, complex social stratification, unsatisfactory infrastructure and weak governance.” (World Bank, 2005) In 2011, Bihar was home to 32 million people living below the poverty line, with 66 percent of the rural population being landless (GoI, 2011). The state has a Human Development Index (HDI) of 0.447, which is one of the lowest for India. The national average is 0.504, while the highest is 0.625 for the state of Kerala (UNDP, 2015). Bihar has the lowest level of literacy (63.82 percent) and female literacy (53.33 percent) in India, compared to the national averages of 74.04 percent and 65.46 percent (Census of India, 2011).

Chronic indebtedness has been a persistent feature for households in rural Bihar, with households primarily borrowing from non-institutional sources (NABARD, 2014). According to the National Sample Survey (GoI, 2014), 25.3 percent of households in Bihar borrowed from non-institutional sources, compared to a national average of 19 percent, with this debt accounting for 78 percent of all outstanding cash loans in rural Bihar. By comparison, the all-India average is 44 percent of outstanding cash debt from non-institutional sources. This reliance on informal sources is exacerbated by the fact that local moneylenders charge interest rates of upto 120 percent per annum. (RBI, 2007) In most other parts of India, participation in microcredit through MFIs or SHGs has helped reduced reliance on moneylenders – but this has not been the case in rural Bihar. Bihar had extremely low rates of participation in microcredit, with only 10 percent of rural households even being members of MFIs or SHGs, and not all borrowing from them. (World Bank, 2007) This high reliance on non-institutional sources of credit was one of the reasons that prompted the Government of Bihar, with funding from the World Bank, to implement the Bihar Rural Livelihoods Project, also known as Jeevika, the Hindi word for livelihood.

# Timeline

A baseline quantitative survey was administered during July to October of 2011. The project began in the early rollout (“treatment”) panchayats between January and April 2012, and the follow-up quantitative survey was completed between July and September, 2014. Thus the duration of exposure to the intervention in treatment areas was just over two years at most (roll-out was not immediate throughout the early rollout areas due to project capacity constraints). Qualitative data was collected in twelve cycles over slightly more than three years from 2011 to early 2015. An additional round of data collection was planned, delayed, and then ultimately cancelled. This led to delays in the finalization of analysis and submission of the final project report.

# Evaluation design, methods and implementation

In order to evaluate the impacts of Jeevika, 180 panchayats were randomly selected from within 16 blocks in seven districts where scale-up of the project was planned but had not yet occurred.[[7]](#footnote-7) Some of these blocks were in districts relatively far from Patna, which had not yet been entered by the project (Madhepura, Saharsa, Supaul), while others were within the larger districts within which Jeevika was already operating (Gaya, Nalanda, Madhubani, Muzaffarpur). The project had already entered these districts in Phase 1, but had not yet expanded to all blocks due to (project) capacity constraints. Within each of the study villages, hamlets (*tolas*) in which the majority of the population belonged to a scheduled caste or scheduled tribe were identified. This was the same procedure as used by Jeevika to identify the target population (of poor women) for mobilization into the project. Tolas were identified through a focus group discussion held in each village, along with the population of target castes (SC/STs) within each. In Bihar, tola boundaries are easily distinguishable. Field teams would enter the tola at a random point, determine the skip pattern based on the population size and target sample size, and select households through a random walk. Survey staff aimed to include 70% SC/ST households, and 30% households from other castes in each village, in order to ensure variation in socio-economic status within the sample. If the households in selected tolas included fewer SC/ST households than this, households from nearby non-SC/ST majority tolas were also included in the sample.

Interviews for the quantitative study were conducted using a structured paper survey form. Baseline and follow up surveys included detailed questions on debt, asset holdings, consumption expenditures, livelihood activities, and women’s mobility, role in household decisions, and aspirations. In addition, in each village, a focus group discussion was conducted, through which data were collected on village level attributes such as local sources of credit, interest rates from each source, local wage rates, and the presence of or distance to markets and other institutions and amenities. Respondents were not compensated for their time. If a respondent was unavailable during initial field visit, the supervisor recorded contact details and returned with interviewers at a later date. As long as the survey team was in that district, repeat visits were undertaken, keeping attrition to a minimum. If a household could not be re-surveyed at endline, it was replaced with another household in the same village. Short re-surveys containing a subset of questions from the main survey were conducted by supervisors for 10% of the sample. Staff from the project also conducted occasional visits after the survey was completed in a village to confirm that all modules had been covered by survey staff. Data was entered in duplicate using CSPro and any discrepancies were corrected based on the paper form.

Following the baseline survey, panchayats were stratified on the 16 administrative blocks in the sample and the panchayat-level mean of outstanding high cost (monthly interest rate of 4% or higher) debt held by households at baseline. They were then randomly assigned to an early rollout group or a late rollout group using the random number generator within the Stata statistical analysis software package.

Figure 2 provides a flow diagram of the quantitative evaluation. The baseline survey was administered to 8988 households across 333 villages in 179 panchayats. The target number of households per panchayat was 50, but there was some variation around this in reality. The lowest number of households in a given panchayat was 49 (9 panchayats), and the largest number was 53 households (3 panchayats). To ensure that control panchayats were not entered by the project, Jeevika held a quarterly "evaluation panchayat" meeting, which block project managers of the 16 blocks were required to attend. At these meetings the project M&E team checked whether any village in a control panchayat had been entered, and received an update on progress in treatment panchayats. This procedure was successful in maintaining adherence to randomized treatment assignment throughout the evaluation period.

**Figure 2.** Study Flow Diagram (Quantitative Study)

Allocated to early roll-out (Cl = 89; n = 4,472)

  SHG member by endline (Cl = 89; n = 2,722)

  Not SHG member by endline (Cl = 89; n = 1,694)

  Unknown SHG membership at endline (Cl=39; n = 56)

Randomized (Cl=179; n= 8,988)

Sampled

(Clusters = 180)

(expected n = 9000)

Analysed (Cl = 89; n = 4,471)  
 Excluded from analysis (give reasons) (n= 132, lost to follow-up)

Analysed (Cl = 90; n = 4,516)   
 Excluded from analysis (give reasons) (n = 128, lost to follow-up)

 Lost to follow-up (Cl = 67; n= 128)

 Added at follow-up (Cl = 67; n= 128)

 Lost to follow-up (Cl = 68; n= 132)

 Added at follow-up (Cl = 68; n= 131)

## Targeted sample

Excluded (Clusters = 1)

  Not meeting inclusion criteria (Cl = 0)

  Declined to participate (Cl = 0)

  Other reasons (security problems) (Cl = 1)

## Allocation

Allocated to control group (Cl = 90; n = 4,516)

  SHG member by endline (Cl = 59; n = 460)

  Not SHG member by endline (Cl = 90; n = 3,975)

  Unknown SHG membership at EL (Cl=49; n = 81)

## Follow-Up

## Analysis

Of the 4,472 households in the sample across 89 panchayats allocated to receive the SHG intervention, 2,722 reported that one of their members belonged to an SHG by endline, constituting 61% of the sample.[[8]](#footnote-8) Since SHG membership was optional, approximately 38% of households in treatment group panchayats had no member in an SHG by endline. The remaining 56 households (across 39 panchayats) did not answer this question or were lost to follow-up (only one such household was not replaced). Although it was possible for those residing in control areas to join (non-Jeevika) SHGs, the proportion of households group in this area containing SHG members remained minimal at endline, with only 460 households (just over 10% of the total sample) reporting SHG membership. Attrition (and replacement) were similar in control and treatment arms, with 132 treatment group baseline households not reached for a follow-up interview and all but one of these replaced, and 128 not reached and thus replaced in the control group.

The qualitative evaluation draws on data collected from 2011 to early 2015 in six villages, two where Jeevikahad been operating since 2006, two it entered during Phase II, and two where it had not yet intervened by the end of data collection. The Phase I treatment villages were selected at random from the set of previously entered villages in two different districts – Muzaffarpur and Madhubani. Each treatment village was then matched with a set of control villages using propensity score matching methods (Imbens and Rubin 2015) on the basis of village level data from the 2001 government census on literacy, caste composition, landlessness, levels of outmigration, and the availability of infrastructure.

In order to find the closest treatment-control match, field investigators then visited the set of possible controls for two days for visual inspection and qualitative assessment. This combined quantitative and qualitative matching method yielded three matched pairs of phase I treatment, phase II treatment, and control villages, with each pair located within the same district.[[9]](#footnote-9) This method of sample selection allows comparison of villages receiving the intervention at each stage with their statistical clones that received it at a different stage or had not received it at all, allowing us to draw causal inferences about the effects induced by *Jeevika* during the different phases of its expansion.

For the purpose of keeping their identity anonymous, we refer to the villages in Madhubani district as Ramganj (Phase I treatment), Nauganj (Phase II treatment) and Virganj (control) and the villages in Muzaffarpur district Saifpur (Phase I treatment), Raipur (Phase II treatment) and Bhimpur (Control). Villages in Madhubani are divided into segregated and caste-homogenous *tolas*. Brahmins are a majority in these villages, and their *tolas* are located close to the main resources of the village: the temple, pond and school. All other *tolas* extend southwards in decreasing order of status in the caste hierarchy, with the Schedule Caste (SC)[[10]](#footnote-10) communities being located farthest south. Each of these communities is also spatially segregated. The SC communities of these villages are mainly comprised of Musahar, Pasi, Ram, and Dhobi subcastes, and the other backward caste communities are comprised of Yadav, Mandal, Badhai, Hajaam, and Teli subcastes. The only big difference between Ramganj and Virganj is that the former has a sizeable Muslim population, comprising Sheikhs, Ansaris, Nutts and Pamariyas, while in the latter, there is only one Muslim (Sheikh) family in the entire village. Inhabitants of these villages primarily depend on agriculture and related activities for their livelihood. The villages in Muzaffarpur district are largely similar to the ones in Madhubani with the important differences being that they are primarily bazaar (market)-centric and the dominant caste is the Chaudhury, who belong to the business community.

In each of these villages, first, preliminary studies were conducted using several participatory rural appraisal methods to gain an understanding of the layout of the village.[[11]](#footnote-11) Following this, a team of four field investigators (recruited from a local research-based NGO) accompanied by one of the three principal researchers would visit the villages every three to four months for a cycle of data collection (11 in total over the study period). During every cycle, the ethnographers would enter a different tola in the village for a week (there are roughly 10 tolas in each village). The ethnographers spoke to as many respondents as possible across the village and also returned to the first few respondents in the concluding cycles of data collection. These repeat interviews allowed us to see how respondents reflected on changes experienced as a result of the project [or otherwise] over the four-year period. The first set of participants was selected to be representative of different socioeconomic strata in the village, and subsequent participants were selected via a mixture of purposive and snowball sampling. We interviewed women who were members of JEEViKA, their husbands, and key informants in the village such as religious heads, village council members, moneylenders, subsidized food shop dealers, landlords, and public officials.

Qualitative data were collected in the villages through a variety of methods: a) personal interviews (open-ended structured and unstructured) and conversations with program participants and non-participants; b) focus group discussions with participants and non-participants; c) passive observation of group meetings, trainings, workshops, mobilization drives and interactions at several levels (village, block, district); d) structured interviews with Jeevika staff at all levels in all villages; and finally e) interviews and focus groups with men and other key stakeholders in the village (religious heads, village council members, moneylenders, subsidized food shop dealers, landlords, and other public officials). The interviews, observations and focus group discussions were guided by a set of themes that were modified throughout the data collection. The interviews were conducted in the local language (Hindi and Maithili) by researchers, transcribed in English, and coded in QSR NVivo (a qualitative data analysis software). During the coding, some themes were preselected to match the themes of the questions asked, but we also allowed themes to emerge from the data in an inductive mode.

These multiple cycles of data, coupled with the matched experimental design, allow us to understand cause-effect relations and the mechanismsof change over time. We are able to study social processes as they unfold in the villages with the evolution of Jeevika, rather than being solely reliant on informant recall. In addition, having a comparison across districts allows us to capture variation in processes that occurred in similar rural landscapes. In addition, the qualitative nature of the study permits us to incorporate the participants’ own evaluative metrics and to understand why the women prioritize certain transformations over others.

The interviews were combined with direct observation of project activities and focused on understanding how the project and its frontline workers were responsible for the changes experienced. Interviews took one to two hours. They were conducted in the local language (Hindi or Maithili), simultaneously recorded, and then transcribed verbatim into English. In total, over 2000 interviews were conducted (250 with men and the rest with women). Transcripts were coded in NVivo, after which the data were analyzed inductively. In the first step, we tried to understand what kind of changes men and women talked about within treatment villages and to what extent they were attributed to JEEViKA exclusively. After this, data were grouped by emerging themes. Six themes emerged as salient: physical mobility, husband’s reaction, dignity of borrowing, information on village-credit network, perception of government and collectivization.

# Program design, methods and implementation

This section outlines the three stages of community facilitation in JEEViKA—village entry, mobilization and everyday life—and provides a systematic overview of how facilitators operated in these stages in Phase I versus Phase II. The differences between the two phases are summarized in Figure 3.

**Figure 3.** Principles of facilitation in Phase I and Phase II villages

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Stage** | **Phase I** | **Phase II** |
| 1. | **Village Entry** | Doing a thorough power analysis/informal information gathering | Getting a ‘buy-in’ for the project |
| 2. | Social mapping as a means of taking site of knowledge production to the village | Social mapping as a means of arriving at a number of target households |
| 3. | **Meetings** | Focusing on collective capabilities | Focusing on individual material outcomes |
| 4. | Turning first movers into eyes and ears of the community | Turning first movers into agents of the facilitators |
| 5. | **Everyday life of Project** | Ritualization | Rote recitation |
| 6. | Engaging head-on with elite capture | Keeping local politics at bay |

## Village Entry

The first step of a project at the community level is called ‘village entry.’ In this step, it is project protocol to first get approval from key stakeholders in the village and then conduct a social mapping to find the poorest households. Following this, facilitators proceed with gathering women from those identified households into the project’s fold until they reach ‘saturation’ (i.e., when the project has mobilized 80 percent of its target audience).

### Doing a thorough power analysis versus getting ‘buy-in’

In Phase I, village entry began with a series of informal conversations with the key stakeholders in the village—local politicians, traditional leaders, moneylenders, school teachers, landowners and other influential men and women—as a means of information gathering. In these initial stages, Area Coordinators (ACs) and Community Coordinators (CCs) employed by the project [[12]](#footnote-12) collected a large amount of information on caste dynamics, land-use patterns, informal moneylending practices and patriarchy, and tried to locate women’s interests and positions in each village. “…it was our main task to figure out how to work within these setups so as to be as least disruptive as possible. We had to avoid being seen as threatening, but we also had to get them to reveal reliable information about the village.”[[13]](#footnote-13) In these initial stages, facilitators repeatedly emphasized that there was no substitute for time. For instance, one of the district level community trainers, formerly an AC in the first phase, explained to us how it took him between one to three months to get the information he needed to form SHGs. “I remember going to a village once where for several months no one would speak to us. The environment was extremely tense, but no one would tell us what was going on. It took six months of probing in and around the village to figure it out: We had happened to enter the village at a moment when a twenty-five-year-long feud between two dominant caste groups over a piece of land had reach its culmination and both groups were waging war against each other. The entire village was split up on the issue. We immediately took note of this and knew that village-wide meetings were impossible, as were inter-caste SHGs, at least in the initial stages. We had to find an alternative strategy.”[[14]](#footnote-14)

There were insights gained in this stage that were specific to each village, but some that were universal as well. All ACs and CCs, for instance, mentioned three things that they learned early on. First, they understood that they were about to operate in a context with an extremely high density of failed projects that had microcredit components similar to JEEViKA. As a result, there was a strong mistrust towards such projects and villagers were skeptical of putting their savings into them. Second, the facilitators learned that a long history of identity politics had created a culture of ‘caste-based handouts’: People expected to be treated as beneficiaries, and expected more if they belonged to particular castes. Finally, they learned that the villagers’ closest point of reference for outsiders coming to collect demographic data was the census officers who were derided for gathering all their information by talking only to key stakeholders and only stopping by the first few houses in the village. As we will see later, the project’s messaging during the initial mobilization stages rested heavily on disassociating itself from these three things.

Once information was gathered, an ongoing conversation between facilitators and key stakeholders began in Phase I villages, in particular between local leaders from traditional caste panchayats and elected Panchayati Raj Institution (PRI) members (*Mukhiya*, *Sarpanch*, *Panch*, and ward members.)[[15]](#footnote-15) One of the DTOs gives an example, “…In a few villages in Purnea district, for instance, we were not offered a room to stay in by the PRI members, and spent several nights sleeping on the streets or in the village temple. When they didn’t want to listen to us, we started a sanitation drive. We began by going around the village and picking up trash, cleaning the public spaces, etc. We did whatever it took in those initial days to gain their trust and hung around till they finally listened to us.”[[16]](#footnote-16) Once the village heads were prepared to cooperate, a series of negotiations and network-building exercises began. “… their first question is always, ‘What do *we* get out of this?’ The hardest part is to get the Mukhiya and his men to think beyond the ‘what are we going to gain’ (*humko kya fayeda*) mentality, and focus their attention squarely on the fact that no one has anything to gain; we are here to help, not give subsidies. (*hum sahayta dete hain, chhoot nahi*) We give nothing, and ask for nothing in return…”[[17]](#footnote-17)

Phase I facilitators claim to have treated these negotiations with utmost care. They could not be seen by the rest of the village as colluding with or privileging certain social groups over others, but they could not be seen as antagonizing them either. “…[G]etting their blessings, and then respectfully bypassing them to reach the community was our hardest challenge. And it helps to be seen as social workers in this regard, and not as political brokers.”[[18]](#footnote-18) [[19]](#footnote-19)

In Phase I, getting support was seen as crucial not only in the initial stages but was also constantly nurtured throughout the life cycle of the project. To give an example, two years into the project, once women started stepping out of their homes and going to banks, police stations, and other public spaces in order to get their JEEViKA-related work done, the village *Maulana* (or Muslim religious head) began to interfere. He accused the project for having pushed women away from their domestic duties, and he also complained about the fact that women were now earning interest money.

“…as the project moved along, we started facing some difficulties, particularly in Muslim communities. The women were concerned about having to pay interest on their own savings. I had to speak to the *Maulana* about this because that’s where the husbands said the pressure was coming from. When I met *Maulana* ji, he echoed the women’s concerns: ‘Taking interest is a sin, (*biyaaz lena haraam hai*),’ he said. I listened patiently, but I asked him, ‘Don’t rich people in your community go to the bank to save their money? Don’t they get paid interest on that money? Then what is the harm? Moreover, no one is really earning interest in the traditional sense. Women are simply adding interest into their own savings!’ It took a long time but I convinced him, and then the husbands, then the women. Thankfully now he lets the women participate.”[[20]](#footnote-20)

In Phase II of JEEViKA, on the other hand, this entire process of gathering information informally was relatively short, and village entry was rarely associated with gaining an understanding of the village. For instance, in Nauganj, the Phase II village of the Madhubani district, the facilitators entered the village and stayed in the homes of the landlords and ward members. The landlord’s nephew volunteered to assist the ACs and CCs in mobilizing women, and lower caste women from neighboring tolas quickly agreed to enter the project as well. But, as one of their husbands revealed to us, “We accept his authority over us; it’s hard to say no! (*hum unka dhaak maante hain, hum na nahi keh sakte*)” Eventually this same nephew was made a Community Mobilizer (or CM), and his groups were run in such a way that his preferences had a heavy influence on women’s loan decisions. During this crucial initial stage, facilitators sought ‘buy-in’ from stakeholders without doing a power analysis; in effect, mobilization in Phase II may have been quicker than in Phase I, but it failed to capitalize on these initial moments to build a stronger foundation for the SHGs and foster trust. The AC in this village saw his primary responsibility to be the numeric target that was set for village saturation. “It is difficult under the current circumstances to meet these targets. There is a lot of resistance based on their experience with previous projects of this nature, but we have to mobilize them quickly. We have to meet our goal of a certain number of SHGs.”[[21]](#footnote-21)

### Social mapping to facilitate local knowledge versus achieving numeric targets

Once key stakeholders in the village agreed on the merits of the project, the next step was to identify households to include in the project. This method of identifying the ‘poorest of the poor’ (or POP in JEEViKA’s parlance) involved using census data and hamlet-level information, but also brought in the community to identify the most vulnerable households in a way that established greater ownership and legitimacy over the process.

Facilitators in both Phase I and II demonstrated a comparable understanding of this process. What set them apart is that in Phase I villages, ACs and CCs shared a healthy skepticism towards the process. They knew that it was susceptible to being captured by a few groups, that some voices were louder than others when identifying target households, and most importantly that this list would have to be revised with time as they gained a greater understanding of the community, and the community understood more about the project. In a nutshell, decisions about the community were made *and* changed in the field, with facilitators corrected by participants and vice versa, thereby establishing a model of engagement that was neither entirely bottom up nor top down but which evolved collaboratively on the frontlines.

In Phase II villages, facilitators collected data entirely as a means of arriving at a *number* of target households. The more qualitative data collected in this stage were not utilized during the process of mobilizing women. Moreover, while the ACs and CCs did the mapping exercise and gathered the necessary data, mobilization was ultimately left to Community Resource Persons (CRPs) from another village to whom the numeric target was transferred. However, the qualitative data and the informal knowledge on village dynamics collected in the initial stages were not transferred to these CRPs. As a result, often the households identified by the ACs and CCs in the initial round as the poorest were not the same the households finally mobilized into the project by the CRPs.

### Mobilization

Succumbing to the pressure of numeric targets set by the ACs and CCs during the initial stages of Phase II forced the mobilizers to lead an enrollment drive fraught with shortcuts. This stage in JEEViKA, called the ‘mobilization drive,’ is a crucial moment in the project’s life because the messages communicated in these initial stages had a significant impact not just on women’s decisions to enroll but also to continue to participate.

### Focusing on individual material outcomes versus collective capabilities

In both Phase I and Phase II, messaging was communicated, and mobilization was executed, through flipcharts. In Phase I villages, women were encouraged to engage with the information in the flipcharts, rather than memorizing them verbatim. Most flipcharts had images from folk tales that demonstrated virtues of solidarity, self-help, creativity and resourcefulness, especially in the face of adversity.

“…we thought of these as tools that we hoped women would use as and when necessary, whether in the livelihoods space or within their households or in any other space. As we shared them, we also emboldened women from different backgrounds to share their own stories of deprivation. A poor Dalit woman has a story, but so does a poor Brahmin woman. This kind of dialogue between the tools and different experiences of poverty is necessary.”[[22]](#footnote-22)

In short, the Phase I facilitators allowed for JEEViKA to be a platform where understandings of poverty and its solutions could be contested and forged in a participatory manner. This was in contrast with Phase II, where a dialogue was missing. Instead, facilitators went straight to discussing the merits of JEEViKA and the ways in which it could help women save money, start livelihoods and decrease their debt burden. The women existed as an audience for messages that only the facilitators fully understood. This difference in mobilization resulted in marked differences in women’s expectations: Women in Phase II repeatedly stated that they had not seen results yet. They were frustrated that their short-term goals were not met and threatened to drop out of the project. Moreover, the moment of mobilization into the project barely constituted a memory for them: When asked to recollect it, they would struggle to remember and would provide lackluster responses. In Phase I villages, on the other hand, women recollected this as a rite of passage, narrating names of ACs, dates of joining, events, etc., with great enthusiasm. “I felt so much kinship with this project when Amit *bhaiyya* first came and explained it, that I suggested the name JEEViKA. We were all enthused about it. The idea that as women we could come together to do anything was transformational!”[[23]](#footnote-23)

In Phase II villages, women were told that a primary reason to join was “lower interest rates” (i.e., loans/credit at less expense than other informal sources) or “high paying jobs” or “toilets” (i.e., grants for building household toilets), whereas in Phase I villages, women were told that the reason to join would be “coming together to help each other” in order to solve their individual problems, such as reduced debt burden and eradicating poverty. In other words, while the mobilization process in Phase II focused directly on outcomes, mobilization in Phase I focused on developing collective capabilities and self-reliance.

## Turning first movers into eyes and ears of the community versus using them as agents of the facilitators

When JEEViKA first enters a village, it attracts a set of first movers, (i.e., intrinsically motivated women who self-select into the project early and devote time to setting it up). In Phase I, facilitators got much of their work done through these first movers, making them their primary conduits into the community. Many of these women were taken to Andhra Pradesh for an immersion trip which left an indelible mark on them; They came back with a mission to re-create in their own villages what they had seen. An oft-repeated sentiment was “… our *didis* in Andhra Pradesh are so empowered, that they not only have access to banks now, but can also run all functions of a bank by themselves!”[[24]](#footnote-24) Second, the ACs and CCs encouraged these first movers to share their experiences in their own neighborhoods in order to mobilize more women into joining the project. In fact, for most women in JEEViKA, their first point of contact was not the mobilization event but instead their relationship with first movers in the village whom they trusted. When asked why they had chosen to join in the first place, it was not uncommon to hear them say “…because Shakuntala *didi* (a first mover) asked me to.” The project relied on the first movers’ knowledge of the community and their networks to mobilize women. They were truly seen as brokers whose work was to represent the community’s interests and in the process also construct and cement these interests. Because these brokers came from different backgrounds, the ACs and CCs learned to move away from a unitary representation of the ‘poor.’ They were able to understand and convey to potential participants that there were often multiple, even contradictory, interests within the category of ‘rural poor women.’ Finally, after the facilitators left the village, the first movers were the women who shouldered the responsibilities of the facilitators in their different neighborhoods. They tackled women’s questions and concerns and helped sustain participation in the project. Many of these first movers also went on to become mobilizers and leaders in their SHGs.

The role of the first movers becomes even clearer when seen in comparison to Phase II villages where their centrality is missing to some degree. In Nauganj for instance, the facilitators’ and CRPs’ first stop was the home of Poonam Devi, a former mobilizer with SGSY, an SHG-based program similar to JEEViKA that had a long history of fraud in the village. Poonam Devi herself was seen to be involved in this fraud, but the ACs had little knowledge of this. As our researcher notes “…Poonam Devi has been a part of the loss-making SGSY group as noted by those who were reluctant to join. Her presence made the community suspicious about the credibility of [JEEViKA] CRPs.”[[25]](#footnote-25) Far from being seen as trustworthy, Poonam Devi was eventually seen by the beneficiaries as project staff, representing the project’s rather than the community’s interests. There was also a lot of misinformation right after the facilitators and CRPs completed the mobilization drive and left the village. For example, men and women inquired about whether this was a government initiative, and whether they would have to travel beyond the village as part of JEEViKA membership, but there was no one to give them the information.

## Everyday life of the project

Once the process of mobilization is over, the community requires a period of focused support to form SHGs and to ensure their regular functioning. Through direct observation of meetings, trainings and daily interactions between the project and the beneficiaries, this section details the role played by the facilitators and mobilizers during the everyday life of the project.

### Ritualization versus rote recitation

One of the main contributions of the facilitators was to ritualize the process of a regular schedule of SHG meetings. As we outline in another paper (see Sanyal et al. 2015), SHG meetings in Phase I villages were very disciplined, with the time and place of meetings treated with great sanctity. When groups were being formed, JEEViKA facilitators and eventually the CMs taught SHG members the significance of sitting together in a circle, and the implications of the formation for inclusion and voice. They also taught them how to introduce themselves in every meeting with their own name (rather than their husband’s name, or their caste affiliation), and finally how to sing the JEEViKA song and prayer together. JEEViKA shorthand for these rituals is called the Panchasutra,[[26]](#footnote-26) and one of the roles of the CM is to ensure that women follow these rituals and the principles embodied by them, because it eventually becomes a key criterion for establishing loan eligibility for an SHG.

The Panchasutra is a seemingly prosaic practice, but the orchestration of this social performance of introductions, songs, prayers and slogans, and their deliberate repetition every week for seven years has had a profound impact on the construction of a collective identity. It has given women a new group-based identity that is separate from their caste, marriage and kinship identities. This identity is transformative in its own right and can be mobilized at appropriate moments to make performative claims (Appadurai 2014: 18). For instance, the JEEViKA song, ‘Badhte Kadam,’[[27]](#footnote-27) gives women confidence, and they report enjoying the act of coming together and singing, but it is also leveraged appropriately in other contexts. Manju *didi*, a veteran CRP in Ramganj talks about how the song guides her and gives her inspiration in particularly difficult situations. When she goes on her mobilization drives, she often finds herself losing motivation to keep going, particularly in the face of verbal abuse from men of dominant castes who question her team’s right to be in a public space as lower caste illiterate women. At these junctures, she reminds herself and her fellow mobilizers of the JEEViKA song. They sing it together as a reminder of the essence of what they do, to keep pushing themselves to work on behalf of JEEViKA.[[28]](#footnote-28)

This kind of emphasis on regimented performances is brought about by constantly repeating the messages and songs of JEEViKA during trainings. In one of the trainings we observed in Muzaffarpur, a JEEViKA trainer was providing a refresher course to CRPs in preparation for an upcoming mobilization drive into a neighboring district. The central purpose of this training was building and bolstering the collective identity of the women as ‘*gareeb didi’* (poor sisters, [i.e., women bound with the common thread of poverty]), and exhorting them to take pride in that identity. This was evidenced by the two most repeated sentiments at the training, “We have only one religion alone, and that is poverty,” and “We’re poor, we’re defenseless, so what?” The women were asked to denounce the idea that women are domesticated and meant only for serving other members of their family. These women freely exchanged and repeated ideas about the ways in which norms of femininity are shaped early: From the womb to the toys girls and boys play with, from schooling to the workspace, from the parent’s household to the in-law’s, women in every stage of their lives are reminded and constrained by gender norms. These ideas were enthusiastically received by the CRP *didis* who often joked, interjected, and added on examples from their own experience to underscore a point. Every woman was encouraged to narrate and bring her own life story to the forefront of the mobilization process. Those who were hesitant were encouraged by the other women in the group and by the facilitators. The facilitators often dedicated time during and after the workshop to work on specific details such as how the women occupied space in a room, their body language, eye contact, and other techniques that could help boost their confidence and make them better orators and mobilizers. These are all themes that are constantly repeated, revised and consolidated by JEEViKA throughout its life cycle.

In Phase II villages, on the other hand, a failure to repeat these themes meant that Panchasutra, the songs and practices involved with coming together, were never ritualized in the same way. On the contrary, women struggled to remember the introductions, often thought of the song as a monotonous necessity repeated by rote learning and felt the rituals were burdensome or distracting to their core business of saving and borrowing. Because they considered the meeting space to be concerned exclusively with financial transactions alone—devoid of rituals—absenteeism in meetings was high, and many women sent money through other family members and neighbors who attended the meeting, rather than taking the effort to come themselves. As a result, JEEViKA, in its second phase, was less successful in creating a sense of community among women and thus relatively ineffective in building the foundations for what was to come.

### Engaging head-on with elite capture versus keeping local politics at bay

Livelihoods projects are subject to the same risks of local elite capture and clientelistic politics as other community-based projects. Ensuring that decision-making around loan disbursements are inclusive and democratic requires a significant amount of handholding. In Phase II villages, a perverse mechanism was triggered because facilitators asked SHG members to ‘elect’ their leaders (i.e., the president, secretary and treasurer) without any supervision. ‘Elections’ took the form of all the SHG members coming together and nominating a few people for the three leadership positions by acclamation. Although such an election might have had the appearance of being democratic, in the absence of proper facilitation well-connected and upper caste women took control over the election process and pushed their own candidacies. In effect, such a method established a power relationship that was open to abuse throughout the lifecycle of the project. The most deleterious consequence of this was that SHG leaders could easily manipulate the rest of the group members to give preferential treatment to some over others. Along with this they became adept at representing their own interests as community concerns. In one of the groups, for instance, a few upper caste (Chaudhury) women were found to borrow repeatedly from the group at 2 percent interest rate and lend to non-joiners in the village at 5 percent. For a while, the remaining women, who were from the Halwai community, were unaware this was going on. On finally uncovering the malpractice they complained to the CM, who refused to take action because she was a Chaudhury herself. The consequences of this are far-reaching, particularly because it lowered trust and increased apathy towards the group and its processes over time.

In Phase I villages, however, ACs and CCs carefully engaged in community politics, not just in the initial stages of elections, but throughout the project cycle. First, the election of the SHG leaders was handled carefully, democratic selection through deliberation rather than a ‘show of hands’ election was emphasized, and members were encouraged to elect individuals with motivation and competence rather than influence or wealth to leadership positions. Moreover, the work of those selected was constantly supervised and every two years the leadership positions were rotated among the members to avoid entrenchment of power. As the project moved along and SHGs were federated at the village level, facilitators incentivized leaders to ratify whether or not the most marginalized women had been included in the project’s fold and had access to loans. Finally, and most importantly, the separation of powers between the CM, the group and its leaders was made clear by the facilitators: During meetings, they painstakingly repeated that leaders are the SHG’s representatives and the group has the power to assess the work of and sanction the payment of their CMs, who on the other hand, are there to take notes and do the bookkeeping; it is up to neither of the two—group leaders or CMs—to arbitrate who gets a loan. The role of the members is to monitor the actions of their leaders, compel them to defend their promises, and spawn new leaders in the process.

# Impact analysis and results of the key evaluation questions

As described in the theory of change above, SHG intervention was expected to lead to a series of potential impacts, which we classify as direct, indirect and downstream. All outcomes for the impact evaluation were self-reported by participants or other community members, either during individual interviews conducted at the household, or during focus group discussions conducted at the village level. As detailed in the introductory section, direct impacts are those such as participating in a SHG, or borrowing through a SHG, which the intervention directly encourages. Indirect impacts are those that are a direct consequence of the direct impacts, such as borrowing from sources apart from SHGs, interest rates from these sources, indebtedness and so on. Other impacts on household welfare are downstream impacts. Having one or more direct impacts (increased SHG membership; increased utilization of credit though SHGs) is a necessary but insufficient condition for the intervention to lead to indirect effects on informal credit markets. Changes in downstream outcomes (wealth, consumption level, women’s empowerment) may follow from either direct or indirect impacts.

Based on the registered pre-analysis plan, we estimated the following ANCOVA specification to test the reduced-form, intent-to-treat impact of Jeevika on each group of outcomes:

|  |  |
| --- | --- |
|  | (1) |

where is the outcome of interest for household in village in panchayat in year , is random assignment of the panchayat to early (2012) rollout of the intervention, is a vector of pre-specified baseline controls used in the primary specification, represents the vector of stratification dummies, and is a random individual-level error (notation constant across specifications for simplicity). In addition, to test for heterogeneous treatment effects on households that were landless at baseline, we estimate specification (2):[[29]](#footnote-29)

|  |  |
| --- | --- |
|  | (2) |

where represents the treatment effect on land holding households, is the difference in outcome between landed and landless households in control areas at follow-up, is the treatment effect on landless households, and is the difference in the outcome between the landed and landless at follow-up in the presence of the intervention. This sub-group analysis is motivated by the program’s goal of poverty alleviation (landlessness in rural India is a strong predictor of poverty) and by the fact that the poorest households are typically those who pay the highest interest informal borrowing rates.

Specifications (3) and (4) below mirror those above aside from the omission of non-stratification baseline controls, and are used to test for balance on key outcomes and demographic variables at baseline.

|  |  |
| --- | --- |
|  | (3) |

|  |  |
| --- | --- |
|  | (4) |

Huber-White clustering of standard errors at the panchayat level is employed in all specifications. Since we test multiple hypotheses, many of which are closely related, we follow earlier literature and include regressions of indices for each family of outcomes (as in Kling, Liebman, and Katz, 2007).[[30]](#footnote-30) We take a family to be a set of outcomes measuring the same conceptual outcome, and construct an index of these outcomes as follows. The values of variables within a family are first adjusted so that higher values corresponds to “better” outcomes. Z-scores for each component variable then are calculated by subtracting the control group mean from the treatment group mean, and dividing by the control group standard deviation. If an individual has a response to at least one component measure of an index, then, any missing values for other components are imputed at the random assignment group mean – i.e., treatment observations have the treatment group mean, and control observations have the control group mean. This is the procedure followed in Kling, Liebman and Katz (2007). We then use the Hochberg step-up procedure (Hochberg, 1988) to obtain corrected p-values for these family-level indices, while controlling for the Family Wise Error Rate (FWER) across all families. To implement this procedure, the p-values for the coefficients of the treatment indicator in each of the regressions for the indices are ranked in increasing order. Each original p-value is multiplied by (m + 1 - k), where m is the number of indices and k is the rank of the original p-value. If the resulting value is greater than 1, we assign an adjusted p-value of “>.999.”

We begin the analysis with a description of credit use and costs, assets, and welfare indicators by landholding status at baseline. As shown in Table 1, landless households are more likely to hold any debt than those with land. They also have a larger number of loans than landowning households, but a lower mean level of outstanding debt, implying a smaller average loan size. This pattern echoes Banerjee and Duflo’s (2010) discussion of the high administrative cost of lending to the poor. Indeed, the debt held by landless households is more expensive. Despite a lower overall level of indebtedness, landless households hold slightly more debt on which the monthly interest rate is 4% or higher, defined by Jeevika as “high-cost debt”. The mean (simple) monthly interest rate paid by the landless is half a percentage point higher than that paid by landholding households, indicating an annual difference of 6 percentage points.[[31]](#footnote-31) Given the mean level of indebtedness, this difference implies an additional debt servicing cost of 569 Rs per annum, equivalent to 61.5% of the mean monthly consumption expenditure among the landless.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table 1:** Credit access, assets, and consumption, by landholding status | | | | | |
|  | Means | | |  | Landless - Landed (se) |
|  | *Obs* | *Landless* | *Landed* |  | Difference in Means |
|  |  |  |  |  |  |
| *Credit Markets: Interest Rates, Amounts Borrowed, Loan Terms* | |  |  |  |  |
|  |  |  |  |  |  |
| Any Outstanding Debt | 8988 | 0.87 | 0.81 |  | 0.06\*\*\* |
|  |  |  |  |  | (0.01) |
| No. of Loans (per HH) | 8988 | 2.04 | 1.87 |  | 0.18\*\*\* |
|  |  |  |  |  | (0.04) |
| Total Outstanding Interest-Bearing Debt (000 Rs.) | 8988 | 8.95 | 12.92 |  | -3.97\*\*\* |
|  |  |  |  |  | (0.48) |
| Total Outstanding High Cost Debt (>48% p.a., 000 Rs) | 8988 | 7.68 | 7.54 |  | 0.14 |
|  |  |  |  |  | (0.33) |
| Average Interest Rate | 6462 | 5.46 | 4.95 |  | 0.50\*\*\* |
|  |  |  |  |  | (0.05) |
| Interest Free Loans (No. per HH) | 8988 | 0.11 | 0.27 |  | -0.16\*\*\* |
|  |  |  |  |  | (0.02) |
| *Material Well-Being: Assets and Consumption Expenditures* | |  |  |  |  |
|  |  |  |  |  |  |
| Productive Asset Index (Filmer-Pritchett) | 8988 | -0.21 | 1.00 |  | -1.21\*\*\* |
|  |  |  |  |  | (0.08) |
| Consumption Asset Index (Filmer-Pritchett) | 8988 | -0.60 | 0.65 |  | -1.25\*\*\* |
|  |  |  |  |  | (0.04) |
| Housing Index (Filmer-Pritchett) | 8988 | -0.22 | 0.13 |  | -0.34\*\*\* |
|  |  |  |  |  | (0.04) |
| Real Total Monthly Consumption PA (Rs 000) | 8988 | 0.67 | 0.74 |  | -0.08\*\*\* |
|  |  |  |  |  | (0.01) |
| *Note*: Standard errors of differences in means are clustered at the panchayat level to account for sampling design. | | | | | |

We also see that landless households have fewer interest-free loans. This suggests that informal risk-sharing mechanisms (which typically operate through gift giving or interest-free loans) are less available to landless households than to other households. Finally, the last four rows of Table 1 show that landless households are also economically disadvantaged in terms of their ownership of productive assets aside from land, and have lower material well-being in terms of ownership of durable consumption goods, housing quality, and consumption expenditures.

### Baseline Balance

To establish the validity of the randomized assignment to early rollout, we test for pre-treatment balance across treatment and control groups in the primary outcomes of interest, as specified in the pre-analysis plan, and other important household characteristics. Differences in means for each variable are estimated through linear regressions in which controls for stratification variables are included and standard errors are clustered at the panchayat level. Results, shown in Table C1[[32]](#footnote-32) (column 1), indicate that households in treatment areas are 2 percentage points more likely to include an SHG member.[[33]](#footnote-33) While economically small, the difference in means for this variable is statistically different from zero (low variance near the tails is a feature of the binomial distribution). Relatedly, the mean outstanding SHG debt is also higher in treatment areas at the 1% level, though this difference is also small in economic terms (50 rupees). Monthly interest rates are higher in treatment areas, and this appears to be driven by a difference in informal lending rates alone. An index of productive assets, constructed according to the method proposed in Filmer and Pritchett (2001), is 0.1 points lower in treatment areas as well. We also test for differences across treatment groups specifically among landless and landed households in treatment versus control areas (columns 2 and 3). Again we find small differences in SHG enrollment and debt, and in asset holdings. Variables are significantly different at p<0.05 for 3 of the 25 basic variables tested (grouping SHG membership and SHG debt together, and average interest rate and informal rate together, since these variables are highly correlated). While this is higher than the expected proportion of unbalanced variables (5%) it is not uncommon for this level of unbalance to occur simply through chance, especially as many of these variables are likely to be correlated with one another. We control in the primary analysis presented below for variables that are unbalanced at baseline; omitting these controls leads to qualitatively identical results. Attrition, at 3%, is low given the three-year interval between surveys, and does not differ between treatment and control areas, indicating that differential attrition is not likely to drive the results.

### Direct impacts: SHG membership and borrowing

Table 2 presents estimates of the impact of access to Jeevika in Phase II on SHG membership and outstanding debt to SHGs; overall loans taken, amount borrowed and interest rates. Results shown in columns 1 and 2 of Panel A indicate that over 60% of households in treatment areas had at least one member in a self-help group by follow-up, compared to 10% of households in control areas. We find that take-up of the program is higher among the landless, in line with the program’s aim of targeting the poor, but that a significant share of landowning households also participated. Landless households were 9.7 percentage points more likely to belong to an SHG than landowning households in program areas, and 54 percentage points more likely to belong to a group than their landless peers in non-program areas, while landowning households saw a 43 percentage point increase in their likelihood SHG membership as a result of Jeevika (Panel B). We also see (in column 2) that access to Jeevika resulted in 4 percentage points more households taking out any loans, indicating impacts on the extensive margin of credit use that are consistent with findings on the elasticity of demand for credit in Mexico reported by Karlan and Zinman (2013).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 2.** Direct Effects of Jeevika | | | | | | | | | | | | | | | | | |
|  | SHG Membership (%) |  | Any Loans Taken in the last year? | |  | | Outstanding Debt (000 Rs.) | | | |  | Interest Rates |  | New Loans Taken, past year (000 Rs.) | |  | Family | |
|  |  |  | | All Loans | | SHG Loans | High Cost  (≥ 4% / month) |  | Monthly rate on new loans |  | Total | SHG |  | Index of Dependent Variables | |
|  | (1) |  | (2) | |  | | (3) | | (4) | (5) |  | (6) |  | (7) | (8) |  | (9) | |
|  |  | | | | | | | | | | | | | | | | |
|  | *Panel A: Main effects* | | | | | | | | | | | | | | | | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Jeevika | 51.04\*\*\* |  | 0.04\*\*\* | |  | | -0.86\* | | 1.97\*\*\* | -1.88\*\*\* |  | -0.95\*\*\* |  | -0.20 | 1.91\*\*\* |  | 0.80\*\*\* | |
|  | (1.54) |  | (0.01) | |  | | (0.44) | | (0.09) | (0.38) |  | (0.07) |  | (0.32) | (0.10) |  | (0.03)‡‡‡ | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Additional baseline controls? | yes |  | yes | |  | | yes | | yes | yes |  | yes |  | yes | yes |  | yes | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Number of observations | 8851 |  | 8987 | |  | | 8987 | | 8987 | 8987 |  | 6805 |  | 8987 | 8987 |  | 8988 | |
| Number of clusters | 179 |  | 179 | |  | | 179 | | 179 | 179 |  | 179 |  | 179 | 179 |  | 179 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| R-squared | 0.36 |  | 0.09 | |  | | 0.08 | | 0.13 | 0.06 |  | 0.20 |  | 0.04 | 0.10 |  | 0.24 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Mean of dep var, omitted cat | 10.37 |  | 0.74 | |  | | 17.94 | | 0.13 | 12.97 |  | 5.75 |  | 11.50 | 0.14 |  | 0.00 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Hochberg-corrected p-value |  |  |  | |  | |  | |  |  |  |  |  |  |  |  | 0.00 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
|  | *Panel B: Heterogeneous effects by landholdings* | | | | | | | | | | | | | | | | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Jeevika | 42.97\*\*\* |  | 0.06\*\*\* | |  | | -2.28\* | | 1.69\*\*\* | -1.46 |  | -0.65\*\*\* |  | -1.65\*\* | 1.67\*\*\* |  | 0.69\*\*\* | |
|  | (2.25) |  | (0.02) | |  | | (1.36) | | (0.15) | (0.89) |  | (0.12) |  | (0.81) | (0.16) |  | (0.04)‡‡‡ | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Landless HH | -1.55 |  | 0.07\*\*\* | |  | | -4.64\*\*\* | | -0.01 | -0.51 |  | 0.56\*\*\* |  | -1.62\*\* | 0.01 |  | -0.01 | |
|  | (1.25) |  | (0.02) | |  | | (1.18) | | (0.06) | (0.88) |  | (0.09) |  | (0.77) | (0.07) |  | (0.02) | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Jeevika X landless | 11.27\*\*\* |  | -0.02 | |  | | 2.05 | | 0.39\*\* | -0.59 |  | -0.41\*\*\* |  | 2.06\*\* | 0.33\* |  | 0.16\*\*\* | |
|  | (2.19) |  | (0.02) | |  | | (1.59) | | (0.16) | (1.07) |  | (0.14) |  | (0.98) | (0.18) |  | (0.04) | |
| *Linear combinations* |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Effect of Jeevika if landless | 54.25\*\*\* |  | 0.04\*\*\* | |  | | -0.22 | | 2.07\*\*\* | -2.04\*\*\* |  | -1.06\*\*\* |  | 0.41 | 2.00\*\*\* |  | 0.85\*\*\* | |
|  | (1.61) |  | (0.01) | |  | | (0.50) | | (0.10) | (0.46) |  | (0.08) |  | (0.40) | (0.11) |  | (0.03)‡‡‡ | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Effect of landless if Jeevika | 9.72\*\*\* |  | 0.05\*\*\* | |  | | -2.58\*\* | | 0.38\*\* | -1.10 |  | 0.15 |  | 0.44 | 0.34\*\* |  | 0.15\*\*\* | |
|  | (1.85) |  | (0.01) | |  | | (1.16) | | (0.16) | (0.71) |  | (0.10) |  | (0.70) | (0.16) |  | (0.04) | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Additional baseline controls? | yes |  | yes | |  | | yes | | yes | yes |  | yes |  | yes | yes |  | yes | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Number of observations | 8851 |  | 8987 | |  | | 8987 | | 8987 | 8987 |  | 6805 |  | 8987 | 8987 |  | 8988 | |
| Number of clusters | 179 |  | 179 | |  | | 179 | | 179 | 179 |  | 179 |  | 179 | 179 |  | 179 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| R-squared | 0.36 |  | 0.09 | |  | | 0.09 | | 0.13 | 0.06 |  | 0.21 |  | 0.04 | 0.10 |  | 0.24 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Mean of dep var, omitted cat | 8.97 |  | 0.64 | |  | | 24.51 | | 0.11 | 13.62 |  | 5.12 |  | 13.52 | 0.09 |  | -0.03 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| Hochberg-corrected p-values |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| *Treatment if landless* |  |  |  | |  | |  | |  |  |  |  |  |  |  |  | 0.000 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| *Treatment if landed* |  |  |  | |  | |  | |  |  |  |  |  |  |  |  | 0.000 | |
|  |  |  |  | |  | |  | |  |  |  |  |  |  |  |  |  | |
| *Notes:* Standard errors clustered at the panchayat level shown in parentheses. Coefficients are from an ANCOVA specification - linear regressions of each outcome on its value at baseline, and an indicator of treatment status; panel B has linear regressions of each outcome on indicators of treatment status, landessness, and their interaction. Stratification dummies and baseline controls († in Table A1) are included in all specifications. Landless status is landlessness at the time of the baseline survey. | | | | | | | | | | | | | | | | | |
| Columns 9 presents coefficients in a regression of z-scores of the outcome variables in this "family" - SHG membership, any loans taken, all outstanding debt, outstanding SHG debt, outstanding High-cost debt, interest rates, total amount borrowed last year, SHG amount borrowed last year - following Kling, Liebman, and Katz (2007). p-values for these regressions are reported using Hochberg's step-down method to control the FWER across all index outcomes. | | | | | | | | | | | | | | | | | |
| \* p<0.1, \*\* p<0.05; \*\*\* p<0.01 | | | | | | | | | | | | | | | | | |
| ‡ p-adjusted < 0.1, ‡‡ p-adjusted < 0.05, ‡‡‡ p-adjusted < 0.01 | | | |  | |  | |

While the program appears to have had a slight negative impact (Rs. 860, p<0.1) on the total amount of outstanding household debt observed in treatment relative to control areas (column 3), we see a significantly higher value of debt (by close to Rs. 2000) owed to SHGs (column 4), and a corresponding decrease in high-cost debt (column 5). Scaling the increase in SHG debt by program-induced SHG membership, 91% of the lending capital transferred to groups through Jeevika had been extended as credit to households at the time of the follow-up survey, as intended. The substitution in loan source results in a strong negative effect on the average interest rate on households’ outstanding debt, and on the amount of debt for which the monthly interest rate is 4% per month or higher. On average, such “high cost” debt is Rs. 1880 lower in treatment areas by the endline, a 14.5% reduction relative to control panchayats. Credit was offered through Jeevika SHGs at a monthly rate of 2%, less than half the mean baseline informal lending rate. Together with the high levels of loan take-up through the program, this implies a strong direct impact on the average interest rate paid by households on recent loans. Mean monthly rates paid on all loans taken within the past 12 months were a full percentage point lower in program areas, a reduction of 20% compared to control panchayats.[[34]](#footnote-34)

The magnitude of first-order program effects differs by landholding status. The increase in SHG debt is higher among the landless than the landed by Rs. 390, in line with the targeting of poor households by Jeevika (column 4, Panel B). The value of new SHG loans over the past year is also marginally higher among landless households in the treatment group compared to their land-holding neighbors (column 4, Panel B). More difficult to explain is the apparent negative impact of the program on the value of new debt from all sources taken on by land-holding households over the past year (column 7). While on average, households in both landless and land-holding subgroups in both treatment and control areas increased their use of informal debt over the period covered by the evaluation, this expansion was significantly smaller among the land-owning subsample in program areas. This is also reflected in the (marginally significant) negative impact of the program on total debt held by this subsample relative to their peers in control areas (column 3, Panel B). The impact on interest rates is especially pronounced for landless households, who faced higher rates at baseline, as noted in Table 1. Jeevika reduced the difference in average borrowing rates faced by landholding and landless households by two thirds (Table 2, panel B, column 6), and brought down the average interest rate paid by landless households by 19.4%.

In the presence of a baseline difference in outcomes, the ANCOVA estimator is generally less biased than either the simple difference or difference-in-difference estimators, which tend to under- or over- correct for the baseline difference respectively (Frison and Pocock, 1992). We present these two alternative estimators for Jeevika’s direct impacts as upper and lower bounds of the true effect in Table A2. Treatment effects are similar in magnitude and significance under these alternative specifications.

### Indirect impacts: Informal credit rates and lenders

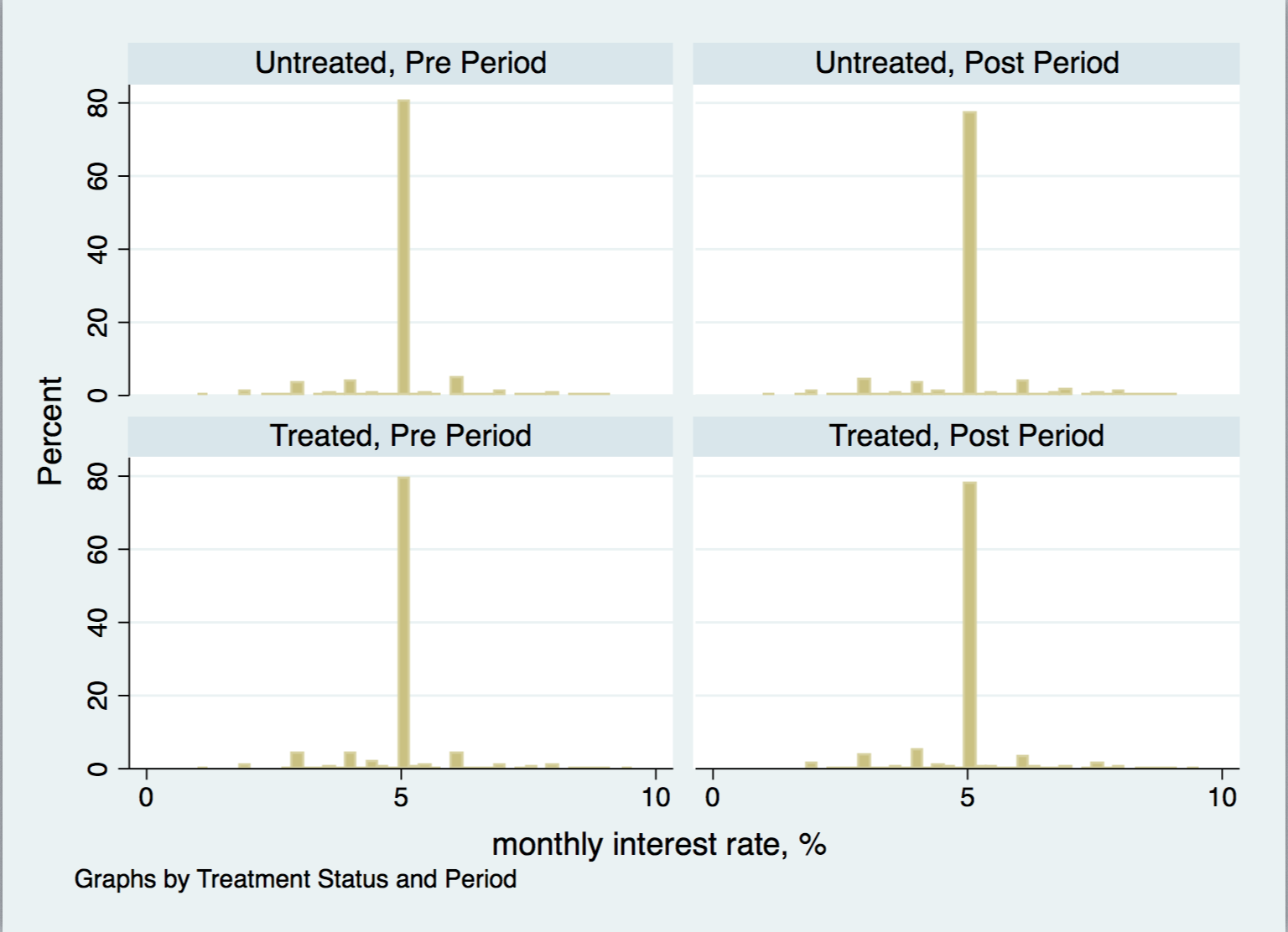
As noted above, the average level of indebtedness increased significantly over the evalution period. This was primarily driven by borrowing from the informal sector. However, Jeevika dampened this expansion in informal borrowing among households residing in treatment relative to control areas (columns 1 and 2, Table 3). The negative (relative) impact on informal borrowing is especially strong for landowning households (Panel B, column 3, Table 3). For this group, lower borrowing form the informal sector in treatment areas exceeds the positive impact on borrowing through SHGs, resulting in a marginally significant negative estimate of the program effect on overall indebtedness for this subsample (Table 2, column 3) relative to landholding households in control areas, and a smaller increase in overall borrowing over the past year relative to those in control panchayats (column 7). For landless households, on the other hand, the expansion in SHG borrowing exceeds the reduction in informal borrowing relative to control areas. We therefore see a positive (but not significant) point estimate on total new borrowing relative to control areas among landless households.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 3. Effects of Jeevika on the informal credit market (Indirect)** | | | | | | | | | | | | | | |  | |  |
|  | Household Survey Data | | | | | | | | | | |  | Village FGD Data | | | | |
|  | Any Informal Loans Taken? |  | Outstanding Informal Debt (000 Rs.) |  | New Informal Loans Taken  (000 Rs.) |  | Informal Interest rate |  | Informal Interest rate |  | Index of Dependent Variables |  | Informal | Money-lenders | | Friends / Relatives | |
|  | (1) |  | (2) |  | (3) |  | (4) |  | (5) |  | (6) |  | (7) | (8) | | (9) | |
|  | *Panel A: Main Effects* | | | | | | | | | | |  | *Panel A: Mean monthly lending rate* | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Jeevika | -0.06\*\*\* |  | -2.65\*\*\* |  | -2.04\*\*\* |  | -0.12\* |  | -0.16\*\* |  | 0.09\*\*\* |  | -0.32\* | -0.32 | | -0.16 | |
|  | (0.01) |  | (0.39) |  | (0.30) |  | (0.07) |  | (0.07) |  | (0.01)‡‡‡ |  | (0.18) | (0.23) | | (0.24) | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| New borrower |  |  |  |  |  |  |  |  | -0.10 |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  | (0.07) |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Jeevika X new borrower |  |  |  |  |  |  |  |  | 0.16 |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  | (0.11) |  |  |  |  |  | |  | |
| *Linear combinations* |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Effect of Jeevika if new borrower |  |  |  |  |  |  |  |  | 0.00 |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  | (0.12) |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Additional baseline controls? | yes |  | yes |  | yes |  | yes |  | yes |  | yes |  | yes | yes | | yes | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Number of observations | 8987 |  | 8987 |  | 8987 |  | 6211 |  | 6211 |  | 8988 |  | 322 | 292 | | 218 | |
| Number of clusters | 179 |  | 179 |  | 179 |  | 179 |  | 179 |  | 179 |  | 179 | 176 | | 147 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| R-squared | 0.09 |  | 0.07 |  | 0.05 |  | 0.22 |  | 0.22 |  | 0.06 |  | 0.42 | 0.41 | | 0.55 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Mean of dep var, omitted cat | 0.72 |  | 16.24 |  | 11.14 |  | 5.75 |  | 5.76 |  | -0.00 |  | 5.73 | 6.00 | | 5.36 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Hochberg-corrected p-value |  |  |  |  |  |  |  |  |  |  | 0.00 |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
|  | *Panel B: Heterogeneous effects by landholdings* | | | | | | | | | | |  | *Panel B: Number of informal lenders* | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Jeevika | -0.04\*\* |  | -3.41\*\*\* |  | -3.14\*\*\* |  | 0.05 |  |  |  | 0.07\*\* |  | -0.27\*\* | -0.08 | | -0.16\*\* | |
|  | (0.02) |  | (1.09) |  | (0.77) |  | (0.10) |  |  |  | (0.03)‡‡‡ |  | (0.12) | (0.07) | | (0.07) | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Landless HH | 0.08\*\*\* |  | -3.04\*\*\* |  | -1.69\*\* |  | 0.48\*\*\* |  |  |  | -0.02 |  |  |  | |  | |
|  | (0.02) |  | (1.05) |  | (0.75) |  | (0.09) |  |  |  | (0.03) |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Jeevika X landless | -0.03 |  | 1.12 |  | 1.56\* |  | -0.23\* |  |  |  | 0.03 |  |  |  | |  | |
|  | (0.02) |  | (1.32) |  | (0.94) |  | (0.13) |  |  |  | (0.04) |  |  |  | |  | |
| *Linear combinations* |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Effect of Jeevika if landless | -0.07\*\*\* |  | -2.30\*\*\* |  | -1.58\*\*\* |  | -0.19\*\* |  |  |  | 0.10\*\*\* |  |  |  | |  | |
|  | (0.01) |  | (0.49) |  | (0.38) |  | (0.08) |  |  |  | (0.02)‡‡‡ |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Effect of landless if Jeevika | 0.05\*\*\* |  | -1.92\* |  | -0.13 |  | 0.25\*\* |  |  |  | 0.00 |  |  |  | |  | |
|  | (0.02) |  | (1.02) |  | (0.64) |  | (0.09) |  |  |  | (0.03) |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Additional baseline controls? | yes |  | yes |  | yes |  | yes |  |  |  | yes |  | yes | yes | | yes | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Number of observations | 8987 |  | 8987 |  | 8987 |  | 6211 |  |  |  | 8988 |  | 333 | 333 | | 333 | |
| Number of clusters | 179 |  | 179 |  | 179 |  | 179 |  |  |  | 179 |  | 179 | 179 | | 179 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| R-squared | 0.09 |  | 0.07 |  | 0.05 |  | 0.22 |  |  |  | 0.06 |  | 0.32 | 0.25 | | 0.42 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Mean of dep var, omitted cat | 0.63 |  | 20.23 |  | 13.12 |  | 5.12 |  |  |  | 0.01 |  | 2.85 | 1.37 | | 1.41 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| Hochberg-corrected p-values |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| *Treatment if landless* |  |  |  |  |  |  |  |  |  |  | 0.000 |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| *Treatment if landed* |  |  |  |  |  |  |  |  |  |  | 0.000 |  |  |  | |  | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | |
| *Notes:* Standard errors clustered at the panchayat level shown in parentheses. Coefficients are from an ANCOVA specification - linear regressions of each outcome on its value at baseline, and an indicator of treatment status; panel B has linear regressions of each outcome on indicators of treatment status, landessness, and their interaction. Stratification dummies and baseline controls († in Table A1) are included in all specifications. Landless status is landlessness at the time of the baseline survey. Village level regressions are from a separate village focus group discussion dataset. | | | | | | | | | | | | | | | | | |
| Column 6 presents coefficients in a regression of z-scores of the outcome variables in this "family" - any loans taken, outstanding debt, new loans, interest rates - following Kling, Liebman, and Katz (2007). p-values for these regressions are reported using Hochberg's step-down method to control the FWER across all index outcomes. | | | | | | | | | | | | | | | | | |
| \* p<0.1, \*\* p<0.05; \*\*\* p<0.01 | | | | | | | | | | | | | | | | |  |
| ‡ p-adjusted < 0.1, ‡‡ p-adjusted < 0.05, ‡‡‡ p-adjusted < 0.01 | | | | | | | | | | | | | | | | |  |

As seen in Table 3 (column 4), our results indicate that Jeevika led to a reduction of 0.11 in the average monthly lending rate paid by households on loans taken from informal lenders over the past 12 months (p<0.1). Splitting the sample by new versus repeat borrowers (those who had not taken an informal loan within 12 months of baseline versus those who had), we see that this reduction is driven entirely by repeat borrowers. This could be due to an assumption by lenders, along the lines of the Demont (2016), that new (and thus unknown to the lender) borrowers, who are unable to satisfy their credit needs through SHGs are likely to be high-risk.

A weakness of using household-level data to estimate impacts on lending rates is that these are affected by the composition of borrowers, which is itself likely to have been affected by the intervention. If households known to lenders as low-risk borrowers (and therefore receiving preferential rates on loans) are also more likely to receive credit through an SHG, this would lead to an upward bias (toward zero in this case) of the intervention’s effect on rates, since the compositional change in borrowers from informal sources would increase the average informal rate.

Data collected through village-level focus group discussions, on the other hand, aimed to get at the publicly known cost of informal credit in each village. While this rate is certainly not immune to the composition of borrowers, we expect that it should be less affected by the identity of borrowers than household-level data. The point estimate of the intervention’s impact on interest rates using these village-level data is indeed larger than that obtained using household data.[[35]](#footnote-35) Overall, informal lenders (including professional moneylenders, shopkeepers, relatives and friends) are reported to charge 0.32 percentage points less per month in villages where Jeevika was present (Table 3, column 7, Panel A). Data from focus group discussions also indicate a decline in the overall number of informal sources mentioned in focus group discussions (Panel B, column 7). This is driven by fewer friends and relatives listed as sources of credit; there is no significant impact on the number of professional moneylenders or shopkeepers (Panel B, columns 8 and 9).



**Figure 4.** Interest rates on loans from informal lenders, taken over the past 12 months.

As shown in Figure 4, which illustrates the distribution of monthly interest rates from informal sector borrowing over the past 12 months by treatment group pre and post intervention, the 2% lending rate offered by Jeevika is barely represented, providing confidence that the impact on informal sector rates is not driven by misclassification of SHG loans as informal loans.

Looking at the impact of being landless in the treatment area, we see that Jeevika reduced the wedge in informal monthly interest rates between landless and landholding households by 50%, from 0.48 percentage points to 0.24 percentage points.

Results for indirect impacts using the alternative (simple difference and difference-in-differences) estimators are shown in Table A4. Overall the estimated effect magnitudes and significance levels are similar. The estimated impact on informal interest rates in the overall sample is larger in magnitude, and differs from zero at a higher degree of statistical significance in the case of the simple difference estimator (A3, panel B, column 4). This result provides reassurance for the validity of interest rate results, as baseline imbalance for this variable goes in the opposite direction as the estimated treatment effect.

### Downstream impacts: Assets, consumption and women’s empowerment

While Jeevika had immediate and dramatic effects on household level borrowing patterns and also appeared to affect credit markets in targeted villages, we see more limited short-term impacts on household asset possession, material well-being and various measures of women’s economic and social empowerment. We test Jeevika’s impact on three asset indices, one for production assets, one for consumption assets, and one for housing quality. These indices are obtained using the method proposed by Filmer and Pritchett (1994). Each group has multiple variables (assets), each of which are binary - 1 if the household owns that particular asset, 0 otherwise. The Filmer-Pritchett index constructs a linear asset index from the set of indicator variables, using principal components analysis to derive the weights. Table 4 shows a positive impact of the program on the ownership of consumption assets. While this effect is statistically significant, it is modest in magnitude, representing a change of 0.06 standard deviations of the consumption asset index variable calculated within the control group at follow-up. The effect is concentrated among landless households, for whom the difference in means across treatment versus control areas represents 0.13 standard deviations of the index among landless households in the control group (Table 4, Panel B). We also observe marginally significant positive effects of the program on both productive assets and housing quality among landless households (Table 4, Panel B), though effects these do not hold for the overall sample. Normalizing the estimated effects by the standard deviation of each index among landless households in the control group at follow-up, Jeevika appears to have increased both productive asset ownership and housing quality by approximately 0.06 standard deviations. No impact is observed for any subgroup on access to entitlements or consumption value. The impact on the index representing this family of outcomes is positive and highly statistically significant (p<0.01) for landless households (Table 4, column 6, Panel B), but weakly negative (p<0.1) for landowning households. Given the baseline imbalance observed in the indices of consumption and productive assets at baseline, we turn to the alternative specifications presented in Table D3. While the results hold up in the simple differences specifications (which does not correct for baseline imbalance), the difference-in-difference estimator (known to over-correct for imbalance) shows no significant impact of the program on any of the outcomes in Table 4, including among landless households. While perhaps overly conservative, this finding suggests caution in attributing impacts on asset holdings to the intervention.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 4. Effects of Jeevika on Household Asset position, Entitlements, and Welfare** | | | | | | | | | |  |  |
|  | Consumption Asset Index |  | Productive Asset Index |  | Housing quality Index |  | Access to entitlements (% any) |  | Real Consumption per AE  (000 Rs) |  | Index of Dependent Variables |
|  | (1) |  | (2) |  | (3) |  | (4) |  | (5) |  | (6) |
|  | *Panel A: Main Effects* | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Jeevika | 0.10\*\* |  | -0.01 |  | 0.01 |  | -0.18 |  | 0.00 |  | 0.02 |
|  | (0.04) |  | (0.02) |  | (0.03) |  | (0.43) |  | (0.02) |  | (0.01) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Additional baseline controls? | yes |  | yes |  | yes |  | yes |  | yes |  | yes |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Number of observations | 8987 |  | 8987 |  | 8987 |  | 8987 |  | 8987 |  | 8988 |
| Number of clusters | 179 |  | 179 |  | 179 |  | 179 |  | 179 |  | 179 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| R-squared | 0.36 |  | 0.23 |  | 0.33 |  | 0.09 |  | 0.06 |  | 0.34 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Mean of dep var, omitted cat | 0.18 |  | -0.11 |  | 0.11 |  | 94.42 |  | 0.95 |  | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Hochberg corrected p-value |  |  |  |  |  |  |  |  |  |  | 0.47 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Panel B: Heterogeneous effects by landholdings* | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Jeevika | -0.07 |  | -0.13 |  | -0.09\* |  | -0.44 |  | -0.01 |  | -0.06\* |
|  | (0.07) |  | (0.08) |  | (0.06) |  | (1.02) |  | (0.04) |  | (0.03) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Landless HH | -0.31\*\*\* |  | -0.33\*\*\* |  | -0.21\*\*\* |  | 1.28 |  | -0.07\* |  | -0.17\*\*\* |
|  | (0.06) |  | (0.06) |  | (0.05) |  | (0.90) |  | (0.04) |  | (0.03) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Jeevika X landless | 0.25\*\*\* |  | 0.17\* |  | 0.15\*\* |  | 0.35 |  | 0.03 |  | 0.11\*\*\* |
|  | (0.08) |  | (0.09) |  | (0.06) |  | (1.24) |  | (0.05) |  | (0.04) |
| *Linear combinations* |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Effect of Jeevika if landless | 0.18\*\*\* |  | 0.04\* |  | 0.06\* |  | -0.09 |  | 0.01 |  | 0.05\*\*\* |
|  | (0.05) |  | (0.02) |  | (0.03) |  | (0.52) |  | (0.02) |  | (0.01)‡‡‡ |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Effect of landless if Jeevika | -0.07 |  | -0.16\*\*\* |  | -0.06 |  | 1.63\* |  | -0.04 |  | -0.06\*\*\* |
|  | (0.05) |  | (0.05) |  | (0.04) |  | (0.90) |  | (0.04) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Additional baseline controls? | yes |  | yes |  | yes |  | yes |  | yes |  | yes |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Number of observations | 8987 |  | 8987 |  | 8987 |  | 8987 |  | 8987 |  | 8988 |
| Number of clusters | 179 |  | 179 |  | 179 |  | 179 |  | 179 |  | 179 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| R-squared | 0.37 |  | 0.24 |  | 0.33 |  | 0.09 |  | 0.06 |  | 0.35 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Mean of dep var, omitted cat | 0.95 |  | 0.45 |  | 0.48 |  | 91.26 |  | 1.09 |  | 0.34 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Hochberg-corrected p-values |  |  |  |  |  |  |  |  |  |  |  |
| *Treatment if landless* |  |  |  |  |  |  |  |  |  |  | 0.000 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| *Treatment if landed* |  |  |  |  |  |  |  |  |  |  | 0.172 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Notes: Standard errors clustered at the panchayat level are shown in parentheses. Coefficients are from an ANCOVA specification - linear regressions of each outcome on its value at baseline, and an indicator of treatment status (plus an indicator of landlessness at baseline and its interaction with treatment status in Panel B). Stratification dummies and baseline controls († in Table A1) are included in all specifications. | | | | | | | | | | | |
| Columns 6 presents coefficients in a regression of z-scores of the outcome variables in this "family" - consumption assets, productive assets, housing quality, access to entitlements, real consumption per adult equivalent - following Kling, Liebman, and Katz (2007). p-values for these regressions are reported using Hochberg's step-down method to control the FWER across all index outcomes. | | | | | | | | | | | |
| \* p<0.1, \*\* p<0.05; \*\*\* p<0.01 | | | | | | | | | | | |
| ‡ p-adjusted < 0.1, ‡‡ p-adjusted < 0.05, ‡‡‡ p-adjusted < 0.01 | | | | | | | | | | | |

Several variables were constructed to measure different aspects of women’s decision-making role, autonomy, capacity for collective action, and aspirations. These variables were constructed to maximize the degree of variation in the sample. The first is an index representing women's participation in household decision making. This is a binary variable, taking a value of 1 when women have any say in one or more of the following decisions: purchases of durables, purchases of personal items, migration of family or primary earner, own labor, borrowing for the family, politics (such as who to vote for), and education of children. The variable takes a value of 0 when the respondent has no say in any of these decisions. The women's mobility index is a binary variable, taking a value of 1 if women are allowed to go alone to more than half the places that they need to go to. It takes a value of 0 if women are allowed to go alone to fewer than half the places they need to go to.[[36]](#footnote-36) The index for propensity towards collective action is a binary variable, indicating whether women have any inclination towards collective action to resolve issues in the village relating to receiving entitlements (what respondents would do if the village control shop has been closed for a month or ration is of bad quality); relating to domestic violence (what respondents would do if a man in their tola was beating his wife, and the wife was admitted to the hospital); relating to chronic and persistent alcoholism (what respondents would do if men in the village waste money on liquor, and outsiders come to the village for liquor making it unsafe for women). For each of the three questions, collective action is coded as 1 if the respondent says she would ask community members to intervene, gather community members to intervene together or intervene herself. The overall collective action index is 1 if any of the sub-indices are 1, indicating propensity for collective action in one or more spheres. Finally, the index for aspirations for girls is a binary variable, which takes a value of 1 if a woman wishes for her daughter to finish high school or higher levels of education.

We see a positive impact on the index of propensity for collective, but a negative impact on women’s role in decision-making within the household (both weakly significant at p<0.1). These two effects cancel each other out in the aggregated index for this family of outcomes, resulting in an estimated family-wise treatment effect of zero. Neither the index of women’s mobility, nor women’s aspirations for their daughters’ educational attainment were significantly affected by the intervention. Because of the weakness of results in the primary specification, we do not present results from alternative estimators for this set of outcomes.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 5. Effects of Jeevika on Women's Economic Roles, Empowerment, and Aspirations** | | | | | | | | | | | |
|  | Proportion HH women work for income (%) |  | Women's decision-making in HH index |  | Women's collective action index |  | Women's Mobility |  | Aspirations for girls |  | Index of Dependent Variables |
|  | (1) |  | (2) |  | (3) |  | (4) |  | (5) |  | (6) |
|  | *Panel A: Main Effects* | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Jeevika | -0.52 |  | -0.08\* |  | 1.96\* |  | -0.01 |  | 0.28 |  | -0.00 |
|  | (0.83) |  | (0.05) |  | (1.05) |  | (0.02) |  | (1.41) |  | (0.01) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Additional baseline controls? | yes |  | yes |  | yes |  | yes |  | yes |  | yes |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Number of observations | 8830 |  | 8841 |  | 8841 |  | 8029 |  | 3910 |  | 8988 |
| Number of clusters | 179 |  | 179 |  | 179 |  | 179 |  | 179 |  | 179 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| R-squared | 0.17 |  | 0.07 |  | 0.05 |  | 0.06 |  | 0.16 |  | 0.08 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Mean of dep var, omitted cat | 72.58 |  | 6.27 |  | 87.44 |  | 5.79 |  | 29.08 |  | -0.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Hochberg corrected p-value |  |  |  |  |  |  |  |  |  |  | 0.82 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Panel B: Heterogeneous effects by landholdings* | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Jeevika | 1.10 |  | -0.11 |  | 2.09 |  | -0.00 |  | 2.94 |  | 0.01 |
|  | (1.93) |  | (0.06) |  | (1.56) |  | (0.03) |  | (2.98) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Landless HH | 7.10\*\*\* |  | -0.02 |  | -0.14 |  | 0.04\*\* |  | -10.53\*\*\* |  | 0.03\* |
|  | (1.82) |  | (0.04) |  | (1.12) |  | (0.02) |  | (2.47) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Jeevika X landless | -2.40 |  | 0.04 |  | -0.19 |  | -0.01 |  | -3.33 |  | -0.02 |
|  | (2.33) |  | (0.06) |  | (1.49) |  | (0.03) |  | (3.35) |  | (0.02) |
| *Linear combinations* |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Effect of Jeevika if landless | -1.30 |  | -0.07 |  | 1.90\* |  | -0.01 |  | -0.39 |  | -0.01 |
|  | (1.02) |  | (0.05) |  | (1.10) |  | (0.02) |  | (1.61) |  | (0.01) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Effect of landless if Jeevika | 4.70\*\* |  | 0.01 |  | -0.33 |  | 0.03 |  | -13.86\*\*\* |  | 0.01 |
|  | (1.70) |  | (0.05) |  | (1.18) |  | (0.02) |  | (2.94) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Additional baseline controls? | yes |  | yes |  | yes |  | yes |  | yes |  | yes |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Number of observations | 8830 |  | 8841 |  | 8841 |  | 8029 |  | 3910 |  | 8988 |
| Number of clusters | 179 |  | 179 |  | 179 |  | 179 |  | 179 |  | 179 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| R-squared | 0.18 |  | 0.07 |  | 0.05 |  | 0.06 |  | 0.17 |  | 0.08 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Mean of dep var, omitted cat | 61.26 |  | 6.29 |  | 87.77 |  | 5.14 |  | 45.87 |  | -0.04 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Hochberg-corrected p-values |  |  |  |  |  |  |  |  |  |  |  |
| *Treatment if landless* |  |  |  |  |  |  |  |  |  |  | 0.57 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| *Treatment if landed* |  |  |  |  |  |  |  |  |  |  | 0.70 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| *Notes:* Standard errors clustered at the panchayat level shown in parentheses. Coefficients are from an ANCOVA specification - linear regressions of each outcome on its value at baseline, and an indicator of treatment status; panel B has linear regressions of each outcome on indicators of treatment status, landessness, and their interaction. All specifications control for block dummies and mean high cost debt at the panchayat level at baseline. Additional controls († in Table 1) are included in even-numbered columns. Landless status is landlessness at the time of the baseline survey. | | | | | | | | | | | |
| Column 6 presents coefficients in a regression of z-scores of the outcome variables in this "family" - working women, decision making, collective action, mobility, aspirations - following Kling, Liebman, and Katz (2007). p-values for these regressions are reported using Hochberg's step-down method to control the FWER across all index outcomes. | | | | | | | | | | | |
| \* p<0.1, \*\* p<0.05; \*\*\* p<0.01 | | | | | | | | | | | |
| ‡ p-adjusted < 0.1, ‡‡ p-adjusted < 0.05, ‡‡‡ p-adjusted < 0.01 | | | | | | | | | | | |

### Qualitative outcomes in Phase I villages

In contrast to the Phase II quantitative findings, impacts on women’s roles, empowerment, and mobility appeared to be strong in the Phase I qualitative evaluation. We find that *Jeevika*, by giving women privileged access to *symbolic resources* (that facilitate the formation of a new identity anchored in the SHG, rather than caste or kinship), *physical resources* (such as group money, access to credit and passbooks), and an associated *institutional environment* (new collective entities created by the intervention), led to changes in norms and women’s habitus and cultivated new cultural competencies and capabilities that defied the classical conventions of gender. *Jeevika* created “cultural configurations” (Patterson 2014) that gave economically and socially disadvantaged women access to a well-defined network of people and access to new systems of ‘knowledge’ with which they could challenge old generationally transmitted systems of knowledge that were more concerned with preserving gender boundaries rather than disrupting them.

### Women’s spatial mobility

Meeting attendance required mobility, and a new discourse and identity had started the process of undoing the everyday practice of gender. Through Jeevika, women had a reason to leave the perimeter of their house and to speak with strangers. One participant depicted the dramatic change in this way: “Earlier we were not allowed to stand on the entrance of the house, and women used to be reprimanded if their voice was a little too loud or audible outside their home. But now we can go anywhere we please. (Saifpur, Cycle 1, Chaudhary *tola,* FGD).” Renu Chaudhary from Saifpur described how the restrictions on mobility and interaction had fallen off with time.

Earlier I was confined to my house, I had no freedom to talk to anyone. My brother-in-law would ask me not to go out in the village and my brothers didn’t like for me to be working. They had apprehensions about me joining the group. But now women have really moved ahead. Now women are not burdened with restrictions anymore. Now we talk to other women, even men if required…

* (Saifpur, Cycle 4, Renu Choudhary, Kalwar *tola*)

A woman who was a community mobilizer explained it from her unique perspective:

Earlier I never used to go anywhere. But ever since my association with *Jeevika*, I've started managing a lot of work outside home. Typically, I would go out to conduct meetings and to do SHG related work. I even had to go live in the block office once until our bank linkages were done. But then I realized that if I keep going out for *Jeevika* work and not for work that my family needs done then it will look bad. So now I go to the market when my children need things. I even go to their school when needed. One thing is for sure, that when a woman starts going out of the house, then the in-laws and everyone assumes that she can manage everything, both inside and outside the house

* (Saifpur, Cycle 4, Asha Devi, Kalwaar *tola*)

In Ramganj and Saifpur, men and many women reacted to the new ideas and discourses promoting women’s mobility with resistance. Men would question the morality of women who were part of the project. “They would say, such and such person’s daughter and daughter-in-law have gone out of the home. People would say that these women’s groups are spoiling women; women are going out freely and being indecent. Many would think it’s wrong, and women joining the group are bad women. Some men would even suspect their wives (Saifpur, Cycle 1, Shiv Kumari Devi, Kalwar *tola*).” For many upper caste women, being part of *Jeevika* was extremely difficult in the beginning as their husbands would resort to violence in protest of their enhanced mobility. Some village men passed crude remarks targeted at husbands who had allowed their wives to enroll in *Jeevika*. As a result, some men who had initially allowed their wives to step out forced their withdrawal out of peer pressure and in some cases sanctioned the women.

This sanctioning behavior should be understood as keeping women within conventionalized boundaries of womanly behavior as well as men zealously defending their manliness. Often, men were reacting not just as individual husbands trying to assert their power within a conjugal dynamic, but as members of a larger community that saw this intervention as threatening emasculation. Hence, in the short run, women’s defiance of gender norms, specifically mobility restrictions, was sometimes met with violence and ridicule. Over time these instances had reduced as mobility was legitimized and as *Jeevika* women grew in numbers.

### Solidarity across caste lines

Women from upper castes also reacted to the intervention in the initial days with resistance and some of them continue to distance themselves from it. Particularly in Ramganj where Maithil Brahmins were the dominant caste, some women still chose not to join *Jeevika* because, in their worldview, it was not dignified work. Some Brahmin women who joined after harboring an attitude of disdain and rejection refused to let their daughters-in-law join. It is important to bear in mind, however, that the process of re-negotiating boundaries of womanhood and caste is an ongoing and fluid one. While some women were optimistic about the changes as they unfolded, others were skeptical. Indu Jha, for instance, as the wife of the temple’s head priest, struggled to make peace with the enhanced mobility of lower caste women. As a community mobilizer, she worked hard to convince the staff and the researchers that she had come a long way – that ten years ago, she would not even allow the shadow of a Ram woman to touch her, but now she allowed them into her courtyard and hosted their meeting. Observing her group meetings however revealed the gap between rhetoric and practice. She sat on the bed along with the two other Brahmin group members, while the remaining eleven women from the Ram community jostled for space on the floor. She collected the Brahmin women’s savings by hand and insisted that the rest leave their money on the edge of the bed. She kept women from the Ram community at arms length. The Ram women complained about her in her absence, and it often became a subject of ridicule, both in her absence and her presence. In similar vein, Munki Devi claimed that she was acutely aware of the fact that her mobility was circumscribed, and it would last only as long as her identity as a *Jeevika* woman lasted.

I am allowed to be in the temple premises during our VO meetings because I am a *Jeevika* *didi*. But the day I am not a member of my savings group, you’ll see, they will not accept my donations (to the temple) or allow me in the temple premises ever again. That is the fate of a Domin (Dom woman)

* (Ramganj, Cycle 6, Munki Devi, CRP, Dom *tola*)

### Access to public spaces of deliberation and action

Historically, spaces for public debate and deliberation at the local level in rural India have been strongly associated with the *Panchayati Raj*, which has been established to promote decentralization and grassroots democracy. While it was in the *Gram Sabhas* (village assemblies) that the drama of deliberation and everyday democracy was supposed to unfold (Rao and Sanyal 2010), rural Bihar did not have an established system of holding the constitutionally mandated village assemblies for a long time (Corbridge et al 2001). Even at the *Panchayat* level, local governance has been relatively weak in rural Bihar.Elections were held in 2001 after a gap of twenty-three years, but the *Panchayati Raj* institutions (PRI) neither had functions nor funds. Moreover, evidence suggested that even in the 2001 elections, the upper castes were able to retain their foothold at the grassroots level (even though they lost political ground at higher levels of government), and the sociopolitical profiles of elected Mukhiyas in the 2001 elections were largely similar to those elected in 1978 (Pankaj and Singh 2005). Virganj for instance, had a male Brahmin *Mukhiya* (village president) and *Sarpanch* (judicial head) for thirty years unopposed. As a result, Brahmins dominated every aspect of decision-making and public debate in the village, and villagers complained of a bias in favor of Brahmins in disbursing the benefits of government-subsidized schemes. “Whenever there is conflict or a big decision is to be taken, there are ten senior male members of the village that are called upon. They were all Brahmins for a long time, only now two new members have joined – one Yadav and one Dhobi. (Virganj Baseline Report)”

The Nitish Kumar government introduced laws that reserved 50% of seats in village councils for women, exceeding the 33% mandated by the Indian constitution. As a result, the number of women representatives grew in successive elections from 2006 and 2011. In practice, however, women in the control villages did not see the PRI as a legitimate problem-solving arena that catered to their needs. Instead, they considered it to be a male-dominated space, which did not have room for their voice or interests. In 2001, when Bihar held elections to the village councils for the first time, very few women voted. In the next two elections (2006 and 2011), even though half the seats were reserved for women, in practice, the husbands of the woman candidates would fight the elections. The husbands of the winners would rule the roost. This was termed as the ‘proxy *mukhiya*’ phenomenon.

Interviews with public officials in the control villages revealed that women were seldom seen as capable of being active participants in public debates. Most of the women in Virganj and Bhimpur had never attended the *Aam Sabha*, a forum intended to resolve individual and collective problems raised by participants and for selecting beneficiaries for government schemes. The only women that attended these meetings were widows seeking their old-age pension or their housing rights under a subsidy scheme. For the most part, it was seen as a forum for men, and even if women wanted to attend, they were denied information and access. In control villages, women had never experienced the state directly, instead, they saw it as mediated through the observation of male household members. As a result, a majority of the women across caste and income strata were unaware of how to access state services (how to get entitlements, where to go for public services, who to meet for obtaining signatures etc.).

In strong contrast, women enrolled in *Jeevika*, particularly those women who were position holders in their groups, regularly made their presence felt in the public space of debate andaction. They attended *Aam Sabhas*, occasionally with the stated intention of making noise, freely voicing their opinions against corrupt *mukhiyas* and positioning themselves as being opposed to politics. This was not surprising given that Jeevika, in part, was designed and set up in parallel to the existing local governance system (PRIs). The apex body of the SHGs, the CLF, had been created with the envisioned goal for it to become the principal conduit for the multiple women-centered interventions run by the government.

Even though creating distrust of the PRIs or attempting to replace them was not the intention of the intervention, quite often, the dominant discourse among *Jeevika* women was that the *panchayat* could not be trusted, and it was time they took matters in their own hands. Some of the women were fiercely critical of these institutions. “We are quite against the *mukhiya*. When we said we wanted to attend the *Aam Sabha*, he just stopped holding them! (Ramganj, Cycle 7, Anita Devi, CRP, Dhanuk *tola*).” The women also felt strongly about corruption in the PRIs and were fairly vocal on the issue “You know, they came to bribe us once. They said, “Here goes the money, now get me all the votes from your *Jeevika* ladies.” We rejected the money and told him, just win fair and square if you can.” Some of the women felt confident that, given an opportunity, the CLF could replace the PRIs in some years. “I think if our CLF keeps moving in the right direction, then a day will come when *they* will have to come to *us*.” (Ramganj, Cycle 7, Shakuntala Devi, CLF president, Gopalpur *tola*).

Indeed, many of the *Jeevika* leaders presented themselves as conduits or brokers for public services. They had become the contact points for other women for all kinds of problem reporting and solving, from difficulties in getting their due share of government subsidized food staples to old age pensions and subsidies for housing and sanitation. Women brought their concerns to the leaders of the *Jeevika* SHGs and VOs instead of the PRIs, and the leaders then arbitrated with the PRIs or with other institutions and personnel to resolve the problems. For instance, Shakuntala Devi, the CLF president in Saifpur, spoke about how she particularly enjoyed this aspect of her work – problem-solving and helping other women. Having risen through the ranks and having won *Jeevika* elections at all three levels – SHG, VO, and CLF – she considered it her responsibility to take care of her ‘constituency’ of women. (Our conversations with her were frequently interrupted by women coming to her doorstep for help or information). Her home had turned into an open and inclusive problem-solving arena, where she regularly performed her role as a broker with competence comparable to any skilled politician:

I wish I could take the law into my own hands. Then I would take care of the thirty to forty VOs in my CLF and push each one of those ten thousand *didis* forward. Then we would show everyone that women are not weak. We can sit at the same table with you…You know, all the poor are my supporters. That is because I am against the rich.

* (Saifpur, Cycle 7, Shakuntala Devi, Gopalpur *tola*)

The cases that were informally brought to women leaders who had risen from the rank and file of the intervention were mostly focused on land issues involving *Jeevika* members and non-members. While most cases were dealt with on an individual basis, very often these cases were seen as a means of correcting historical injustices over land meted out by men of dominant castes to women of backward castes.

Given the kind of unity among women, we do take action whenever needed. For instance, one of the members of Ganga *Jeevika* SHG had a land dispute with a Brahmin. The way to her land is through the land of this Brahmin, and he was blocking it, so that no one could pass. All of us women went together and resolved the issue.

* (Ramganj, Cycle 1, Adheera Devi, Hajaam *tola*)

In Saifpur, too, there had been instances of women arbitrating in land disputes. The reason women felt they had to take matters into their own hands was because the existing institutional system did not listen to them, and also because they received no help from the village men.

Men sort out their issues amongst themselves. But when it comes to women, if we get to know about any land disputes of members or non-members, we club together and work to sort out the problem. They have to listen to us then, and why wouldn’t they? We go in large numbers, and non-group members also join us. No man can dare ignore us then.

* (Saifpur, Cycle 4, Anu Devi, CM, Choudhary *tola*)

*Jeevika* members had also arbitrated in financial disputes. Poonam Devi gave the example of solving a moneylending case.

“*Didi* (sister), earlier all conflicts were dealt with by men. Women were not even allowed to be present. But now things have changed. Now ten to twenty women can come together and go and solve any problem. Someone from this village had given a loan of Rs. 4000 to a person from another village. The creditor’s two daughter-in-laws were members of *Jeevika*. Men from that family would go and demand their money but they (debtor) refused to repay. Then ten of us *didi*s hired an autorickshaw and went there and demanded the money and compelled them to repay the loan right away. The debtor repaid. Things have changed *didi*. Now we are confident and can talk to unknown men without hesitation. We got exposure and learnt so many things in *Jeevika*.

* (Saifpur, Cycle 1, Poonam devi, Chaudhary *tola*)

*Jeevika* members had also taken action in disputes involving women and their employers.

Once a brick kiln owner was not refunding Rs. 4000 for four years to one of our members. All of us women hired a Jeep and chased him. We warned him that if he didn’t repay instantly it would cost him his bricks and goats. Finally he repaid on the spot. Women’s collective has established its status in the community, and often people are scared of it. Whenever we go out in a group, people passing by are alert and they start whispering to each other. Earlier they were disrespectful, but now no one dares to be so.

* (Saifpur, Cycle 1, Paswan *tola* FGD)

Group members also arbitrated on behalf of women in domestic violence cases. Unlike women in the control villages who were reluctant to protest on behalf of other women, fearing they would get rebuffed or entangled, women in Ramganj and Saifpur found strength in numbers and did not hesitate to take action.

Yes, we routinely discuss these issues in our meetings. If a group of thirteen members can’t stand up for each other, then what is the use? If I won’t intervene, the woman will die. It happens in every family. If it is a very serious matter we call for a meeting, and they (perpetrator) are made to apologize. All the women from all the groups come to the meeting and take a decision.

* (Saifpur, Cycle 3, Rehana Khatoon, Tok *tola*)

Initially men disapproved of women mobilizing and would often mock their wives: “My husband would taunt us. He said that he would see what women power could achieve. He had doubts about our strength. He felt that when the *mukhiya*, the *sarpanch* and the police could not resolve the land dispute how would we resolve it. But we did it. (Saifpur, Cycle 1, Krishna Devi).” Participants shared that, over time, their husbands and the community had begun to appreciate their efforts to resolve disputes. “They say it is a good thing that women are now united and don’t just sit at home. Now they do meetings and are aware of what’s going on in the house next door and share it in the group, which also makes other women aware of the recent developments in the village. Earlier women didn’t know any better. They didn’t report any mistreatment from men of the village. (Saifpur, Cycle 1, Chaudhary tola FGD)”

Women’s participation in the public space of debate and action had largely expressed itself in the forms of problem solving, arbitration and creating alternatives to the rule of the *sarpanch* and *mukhiya*. The logical conclusion of this process of transformation was standing for elections for positions in the local government (PRIs). A select few women had fought for *panchayat* elections. Shakuntala devi, a CLF leader, felt strongly about her chances of winning and, even though she had been unable to oust the existing order, she had succeeded in mobilizing women who had rallied for her. She had developed a unique political discourse based on rejecting politics and eradicating poverty.

I had fought for *Mukhiya* elections, but I lost. The other candidate bought the seat; he spent thirteen lakhs[[37]](#footnote-37). And I had no money. I had no money to give to any *didi*…My aspiration was that, if I win, I can do social work; I can do the work for all my *didi*s for free; then can you imagine how much our *didi*s would progress? I wanted to fight this business of a proxy *mukhiya*. It’s a women’s seat after all, and if a woman wins the election, she should work! Before elections I had declared that if Iwin, then you will find me at every doorstep and in every SHG and VO meeting. And I will do your work. I have the *jazbaa* (will). I’m going to help the poor. I’m going to get them what they need…

* (Saifpur, Cycle 7, Shakuntala Devi, Gopalpur tola)

For Shakuntala’s counterpart in Rampur, Urmila Devi, the next logical step after becoming the CLF president was also to contest the *panchayat* elections. She contested the elections for the Ward Member position: “Women came in large numbers from eight different villages for the election. And everyone voted for me. You know why? Because I’ve made groups everywhere. And I’ve done it all by foot.” However, she lost out to her opponent: “I would have won if the election had not been rigged by Choudhary. They threatened to be violent when I tried to protest against them.” But this did not deter her from aspiring to stand for elections again. She wanted to stand for the next *Mukhiya* elections, “Give me the position and then see.” (Rampur, Cycle 7, Urmila Devi, CLF president, Paliwar *tola*).

This particular aspect of women’s empowerment had grown without any direct facilitation by *Jeevika*. In 2006, before women were mobilized into the project, *Jeevika* staff had spent a considerable amount of time gaining “buy-in” (i.e. promise of support or non-interference) from key members of the *panchayat* by assuring them that the project had little interest in changing the social and political order of the village, and that it was strictly a women’s microfinance program. This allowed the project to operate without the interference of the *panchayati raj* institutions (PRIs). However, as the project had garnered increased funding and public support, as women’s visibility had been enhanced, and as *Jeevika* women had developed an effective and autonomous problem-solving mechanism that directly challenged the PRIs, the *Jeevika* staff withheld support. Consequently, women often felt let down by the fact that when they asked *Jeevika* for financial or any kind of assistance to fight elections or to fund their mobilization for anti-liquor campaigns, they were denied help. To a large extent, therefore, *Jeevika* women’s entry into the public space of debate and action, particularly the sphere of the *panchayat*, can be seen as an unintended consequence of the project, because it was expected to run parallel to it and pursue economic goals and not intersect with the established political, governance system.

However even though the project did not directly facilitate this, it did create the enabling environment. The women claimed that “*Jeevika* does help build leadership skills and instills confidence in us to handle a community. No school, no formal education can teach you that. (Rampur, Cycle 7, Reena Paswan, CLF Treasurer, Paswan *tola*)” Second, the project had strengthened the notion of a collective by mobilizing and bringing women together under the unifying identity of “*gareeb didi*” (poor women) and through the system of institutional affiliation had significantly improved the terms of recognition under which women participated in the public space.

### Differences in Program Processes from Phase I to Phase II

Although both components draw on data from the same period, the qualitative findings described above come from villages that were involved in the first phase of the project (covering 400,000 households). The quantitative analysis examined villages from the second phase (covering 800,000 households). As the project expanded to its second phase, it had positive but less impressive results. While the goal of debt reduction was achieved to some extent in Phase II, the social empowerment effects (women’s mobility, social capital, participation in the public sphere) were not significantly different from zero.[[38]](#footnote-38) The qualitative comparison of the project as implemented in Phase I versus Phase 2 allows us to illuminate the *why* behind this phase shift, something that remains invisible in the quantitative study.

This comparison reveals that the first phase was akin to a mini-social movement that challenged traditional structures of power and patriarchy (Sanyal et al. 2015). Focusing on the frontlines (i.e., at the village level), we find that the key difference between implementation in the two phases of the project was that mobilizers in the first phase deployed a discourse that was carefully “co-produced” (Ostrom 1996) with its beneficiaries. Through careful groundwork and creative improvisation, mobilizers incorporated the interests of multiple stakeholders on the ground while bringing beneficiaries into the project. However, as the project scaled up to other districts, participants were mobilized quickly with a homogenous and fixed script that lacked the kind of improvisation that characterized the first phase and which failed to include diverse stakeholder interests, objectives and voices. These differences significantly reduced the intensity of participation and its concomitant social impacts. Tracing these differences back from village level to block, block to district, and then district to capital city, we found that the work of facilitators was embedded in a larger shift in organizational priorities within the project, which in turn was responding to the shift in political climate at that juncture.

Through in-depth interviews, we found that the pressure to scale up and scale up quickly led to some of these differences. Owing to its success in the first phase, the project was able to get a buy-in both at the village and at the state government level. Having established that the ‘model works’ in its first phase, the emphasis in the second phase was to spread it far and wide as quickly as possible. Moreover, JEEViKA as one of the state government’s most high-visibility projects faced great pressure in the year before elections (i.e., 2012) to expand very rapidly. The Chief Minister insisted that along with bringing new women into the project, all SHGs from previous projects should also be brought under the fold of JEEViKA. In addition, as the project expanded and scaled up to cover three times as many districts as quickly as possible, the ‘phase shift’ (Mosse 2005) brought with it entirely new organizational dynamics that sped up the mobilization phase and prioritized quantifiable targets over slow experimentation and adaptation. As one of the State Project Managers told us, “manpower, money and monitoring—all three were our key ingredients in the first phase, and we ignored them all in the next phase.”

These three ingredients succinctly capture all the factors that management identified as key. In terms of manpower, the facilitators recruited in JEEViKA’s first phase were an intrinsically motivated group that had a much more dynamic and flexible approach than the second phase facilitators. In contrast, in the second phase, facilitators were less carefully handpicked and lacked the experience and drive of the first phase facilitators. Four thousand new staff were rapidly recruited en masse and degrees were emphasized over work experience in the field. “…there’s a certain kind of zeal missing in the next generation. Something was lost in mass recruitment. It became hard to explain to them that JEEViKA is a path for women, not a destination. ”[[39]](#footnote-39) Moreover, the proportion of field-level staff to the number of SHGs declined in Phase II. In other words, the size of the workforce could not keep up with the number of SHGs, or for that matter with the increasing number of interventions that were gradually rolled out on the SHGs. “… [in the first phase] our only agenda was to mobilize women properly. Now far too many things are part of the mandate.”[[40]](#footnote-40) The sudden increase in the work force also meant that the new facilitators could not be trained directly by the state, but instead had to rely on a second tier of trainers at the district level. Also, unlike the first phase, where their training involved immersion in similar projects in other parts of India, particularly in Andhra Pradesh, in the second phase there were no such immersions. On the contrary, they had targets and were expected to begin mobilizing women from their very first trips to the field, thereby skipping an initial learning phase. These differences in recruitment and training led to “…a frontline that was a dedicated group of *social workers* in the first phase, and a dedicated group of *salesmen* in the second phase.”[[41]](#footnote-41)

Phase II project managers regretted having to move forward quickly without first setting in place robust systems of monitoring and feedback. “…something worked in the first phase, but we didn’t quite know what. There was not enough time to capture institutional learning from the first phase to feed into the second phase… [F]or instance, we had no idea how much time it takes to build a community.”[[42]](#footnote-42) Changes were made to the project design without feedback or a full understanding of what aspects of project design had helped achieve success in the first place. As we will see, one of the main changes—introducing the livelihoods component during institution building, rather than focusing on only building community institutions first as they did before—was a decision made without sufficient feedback. This led to less participation.

Besides facilitation, one of the key changes that had an impact on the second phase was limited resources—money—both for the community and for the project. With a sudden scale-up, limited resources meant there was little room for the kind of slow learning that was possible initially. The second phase focused, therefore, on emulating the first phase and its processes rather than innovating on the frontlines. ACs and CCs who worked in both phases often complained that during the second phase they felt encumbered by rules and procedures for mobilization. “Earlier, we would just simply head out to the field and do our work; now there are formats for everything! (*Pehle hum copy liye aur field mein chal diye, ab sab kuch ka format ban gaya hai.)*”[[43]](#footnote-43) Limited resources also meant there was less money to go around for the SHGs, (JEEViKA decided to cut down on the initial capitalization fund from Rs 50,000 to Rs 15,000) which interviewees felt was responsible for the reduced intensity of inter-loaning and hence the reduced intensity of participation in Phase II.

Moreover, starting in 2012 there was a high turnover in leadership within the project. (There was one CEO from 2006 to 2012. Over the next four years, there were six.) With each change of leadership, principles and operational manuals were revised, and the stability enjoyed during the first phase disappeared. This shift in organizational dynamics and priorities ultimately trickled down to stark differences in mobilization strategies on the frontlines.

Drawing on the qualitative data that focus on daily practices and interactions in the field, we find that JEEViKA in Phase I villages mobilized women into the project and sustained their participation by deploying a discourse that was “coproduced” by the facilitators and the women themselves, a discourse that incorporated multiple interests. We draw on Eleanor Ostrom (1996) for the original formulation of “coproduced” as a process by which “…citizens can play an active role in producing public goods and services of consequence to them” (1073). However, some form of ‘active role by citizens’ or partnership is now so common in service delivery that it renders such a definition trivial. Joshi and Moore (2004) further redefine “coproduction” or “institutionalized coproduction,” as the “provision of public services (broadly defined, to include regulation) through regular, long-term relationships between state agencies and organized groups of citizens, where both make substantial resource contributions” (1).

Coproducing discourse is in many ways similar to coproducing public services. Coproduction of service delivery involves blurring the conventional distinctions between outsider authority and insider knowledge, between public and private. Similarly, coproducing discourse involves purposefully obfuscating boundaries between the formal project script coming from the project HQ and the everyday circumstances of the women in the villages.

In Phase I, facilitators brought a script including flowcharts, images, training modules etc., but on the frontlines, they constantly changed that script by gathering input from women. They reminded mobilizers as well as beneficiaries to rely on their own experience of poverty in order to help other women. The facilitators may or may not have had an in-depth understanding of the context of every village, but they did understand that no village or community or ‘elite group’ or ‘marginalized group’ was homogenous and that there were multiple interests cutting across each category. Creating a common subjective understanding of the complexity of the problem and being sensitive to the diversity of interests was key to effective implementation. As one facilitator pointed out, “…we are not here to preach (*hum pravachan dene nahi aate*). This is an opportunity for us to ask every woman her own individual story of why she is poverty stricken. Some say, ‘because my husband is sick or disabled,’ some say ‘because we routinely suffer abuse in the hands of our employers,’ some say ‘it is because of an outstanding loan,’ some say ‘it’s just how things have been for generations.’ We must hear each story. The women themselves must hear each story.”[[44]](#footnote-44) In other words, the SHG and VO meetings or the training meetings were treated as a space to contest and forge, rather than to impose, meanings of and solutions to poverty. The ultimate aim was to weave divergent narratives into the project’s discourse and together agree on a set of principles and negotiated language. This then provided a framework into which the future actions of both the facilitators and the women would fit.

This kind of coproduction of discourse was key to the success of the project in its first phase, but, in Ostrom’s (1996) terms, the “citizen contribution” of women to this discursive coproduction was hard to routinize. As a result, by the time the project got to its second phase and was under pressure to expand rapidly, facilitators trained with a homogenous and scripted discourse of poverty. On their part, the women, rather than arriving at the solution themselves, were told that the project itself was the solution. Far from being coproduced, in Phase II discourse was imposed from above, was closer to the script and lacked the kind of improvisation characteristic of Phase I. In effect, mobilization was rapid, but women found themselves alienated from the purpose of the project, and the project became an entity outside of them rather than synonymous with them. In the following sections, we discuss six different aspects of this argument, and how both implementation success and failure manifested in the field.

# Discussion

Chronic indebtedness and exploitative moneylenders are well-established tropes in the fictional and cinematic accounts of poverty in rural India. Several studies, including an important recent survey by the National Sample Survey (NSS, 2014) and technical papers by the Reserve Bank of India (RBI 2007, RBI 2011) have documented the widespread reliance of rural households on high-cost debt from the informal sector at rates of up to 150 percent per annum. Over the past two decades, micro-finance institutions have rapidly expanded into markets previously served almost exclusively by traditional moneylenders. One would expect this influx of competition to affect existing credit markets, but the nature of these impacts are not obvious *ex ante*.

The limited empirical literature on this question consists of observational studies and finds either zero or positive impacts of MFI entry on lending rates charged by informal sector lenders. Despite the existence of several randomized studies on the impact of micro-credit programs, none of these to date has documented a significant effect on interest rates. The randomized intervention evaluated in this study, conducted in seven of the 38 districts of Bihar, increased SHG membership by over 50 percentage points. Those who joined a Jeevika SHG shifted almost 30% of their outstanding household debt from the informal sector to Jeevika, on average. The massive influx of relatively low-cost credit extended through Jeevika allows us to detect, for the first time, the impact of a micro-finance intervention on informal credit markets through a randomized evaluation.

At baseline, annual informal interest rates paid by landless households were an average of 6.1 percentage points per year higher than those paid by the landed. SHG entry caused a shift in the informal lending rate offered to these households that reduced this gap by 50%, whereas the point estimate of the impact on rates paid by landowning households is within a quarter of a percentage point of zero per annum. The fact that the impact on lending rates is limited to the economically marginalized is indicative of the segmented nature of credit markets in this context.

Using the impact on the overall informal interest rate based on the focus group data (-0.32% / month), and assuming that households’ informal debt can eventually be refinanced at the lower prevailing rate, we estimate that Jeevika will reduce the average cost of servicing debt to informal creditors by Rs. 624, equivalent to 90% of the mean monthly reported consumption expenditure in this sample. The magnitude of this effect is comparable to the direct average annual savings of Rs. 886 achieved by shifting a portion of household debt out of the high-cost informal sector to lower-cost SHG loans.

Two years after initiation of the program, some specifications indicate that a significant impact on the asset position of landless households was already observed. No impact on consumption expenditures was seen, and only weak and conflicting effects on various measures of women’s empowerment were observed in the quantitative study. Given that the intervention reduced debt servicing costs substantially, it seems likely that asset impacts will strengthen with time, and that other downstream impacts may still arise.

The absence of strong impacts on indicators of women’s empowerment detected through the quantitative study contrasts with the findings of the qualitative investigation of Jeevika’s first phase. By phase II, the qualitative evaluation revealed a significant weakening of Jeevika’s activities related to women’s empowerment. This likely explains the lack of impact observed in the phase II quantitative evaluation.

# Specific findings for policy and practice

The first specific finding for policy and practice is that ***expanding access to low-cost credit among rural households can significantly reduce their debt servicing costs***. Jeevika achieved this by reducing the interest rate paid by the targeted (landless) population, both directly through substitution of informal credit for loans through Jeevika, and indirectly through a competitive effect on the informal market borrowing rate on faced by the poor. Since households did not increase the total value of borrowing, but rather offset the increase in use of credit taken through Jeevika with a reduction in credit from informal sources, the lower interest rates achieved through the program translate directly into reduced debt servicing costs. Given the large proportion of households’ expenditures devoted to debt servicing in rural Bihar, this effect is economically important. Suggestive evidence of follow-on impacts in the short term can be seen in the positive estimated effect of Jeevika on holdings of consumption assets and housing quality over the first two years of the program, though these effects are not robust to alternative specifications. While no effect on consumption value was detected within the two-year period covered by the evaluation, the impacts of lower debt servicing costs on household welfare are expected to continue to accrue over time.

A second specific finding is an apparent **tradeoff between depth and breadth of impact in livelihoods projects**. This finding arises from the comparison of the Phase 1 and Phase 2 impact evaluation results. Qualitative work conducted on communities entered by Jeevika during Phase 1 of the project, as well as a retrospective quantitative evaluation based on Phase 1 (Datta, 2015), indicate strong impacts on women’s empowerment. However, these effects are not found by the quantitative evaluation conducted during Phase 2. Qualitative analysis indicates a far lighter that the reduction in impact by Phase 2 on this dimension were likely due to a lighter touch when the pace and scale of implementation expanded. The implication for policy is that deep cultural changes, for example in women’s roles within and outside the household, require a slower pace and more careful cultivation than is typically possible for projects targeting millions of households.

A third finding, related to the second, is that **impacts observed early in a project’s implementation may not be sustained at scale**. Having established that the ‘model worked’ as a mini social movement for women’s empowerment in its first phase, the emphasis in Jeevika’s second phase was to spread it far and wide as quickly as possible – ultimately to the detriment of Jeevika’s potential to achieve such transformative changes.

# Appendices

## Appendix A: Pre-analysis plan

PRE-ANALYSIS PLAN FOR THE IMPACT EVALUATION OF JEEVIKA

*1. Introduction to JEEVIKA:*

Historically, Bihar has been one of India’s most impoverished states, languishing at the bottom of the heap along various socio-economic dimensions. Social segregation along caste lines, gender discrimination, poor infrastructure and a near breakdown in provision of public amenities had accentuated the abysmal income levels, especially in rural Bihar. However, in recent times, Bihar has witnessed a steady turnaround under a slew of administrative reforms. In late 2006, the Govt. of Bihar inaugurated the Bihar Rural Livelihoods Project or JEEVIKA, executed by the autonomous Bihar Rural Livelihoods Promotion Society and funded by the World Bank. JEEVIKA has become the flagship rural poverty reduction program of the government, operating in 9 out of 34 districts of Bihar. Recently, JEEVIKA received the mandate of scaling up its model across Bihar under the National Rural Livelihoods Mission. Over a period of the next 10 years, the mandate is to mobilize 12.5 million rural HHs into 1 million SHGs (Self Help Group), 65000 VOs (Village Organization) and 1600 CLFs (Cluster Level Federation).

The project's key features include:

a) Focusing on the poor and vulnerable members of the community, particularly women.

b) Building and empowering pro-poor institutions and organizations.

c) Emphasis on stimulating productivity growth in key livelihood sectors and employment generation in the project area.

d) Positioning project investments to be catalytic in nature to spur public and private investment in the livelihood areas/sector of poor households.

e) Identification of existing innovations in various areas and help in developing processes, systems and institutions for scaling up of these innovations.

The primary goal of the project is to promote socio-economic inclusion of rural impoverished households by mobilizing women members from such families into SHGs (Self Help Groups). SHG members meet regularly to participate in savings, borrowing and repayments; additionally, the group provides an opportunity for 10-15 women of similar backgrounds to come together and discuss their day-to-day lives. Each member is required to deposit 10-20 cents weekly; once some equity is established, the members may begin drawing credit from this pool. After some weeks or months of demonstrated group savings, the project provides the SHG with access to lending capital of 875 USD, which the SHG may disburse as loans to its members. Going forward, the goal is to link SHGs to banks and leverage funds from formal credit institutions. The annual cost of credit to SHG members is 24%, a relatively low rate compared to those charged by existing informal creditors.

Once a minimum number (10-15) of SHGs form in a village, they are federated into a Village Organization (VO). The VO acts as a platform through which JEEVIKA initiatives, such as linkages with NGO-led income generating projects or government programs, are communicated to SHG members. The VO also has a mandate to identify issues at the village level and liaise with the project’s staff to provide practical solutions.

*2. The Evaluation Design:*

In 2010, JEEVIKA was expanding into its ‘Phase 2’ areas, 37 new blocks of 9 districts, providing an opportunity to rigorously evaluate this flagship project. Funding was provided by the International Initiative for Impact Evaluation (3ie) and by JEEVIKA for a randomized evaluation of the project. 180 panchayats were randomly selected for inclusion in the study from within 16 blocks in 7 districts in which JEEVIKA was planning to scale up. In each of the study panchayats, one to two villages were then randomly selected for inclusion in the study. In each study village, one or more hamlets in which the majority of the populated belonged to a scheduled caste or scheduled tribe was identified, and households were randomly selected within these. Overall, nearly 9000 households were interviewed at baseline in the 180 study panchayats using a structured data collection instrument. In addition, focus group discussions were held in each study village, one to which all community residents were invited, including men and women, and one which was restricted to women in targeted areas of the community (the intended beneficiaries of the intervention). The purpose of these discussions was to understand baseline community characteristics and capabilities. At the time of the baseline survey, which was fielded from July to early October 2011, JEEViKA was not operating in any of the study panchayats.

Prior to treatment assignment, study panchayats were stratified by block and by the average outstanding value of high-cost loans (defined as loans which have a monthly interest rate equal to 4% and above) reported by households surveyed at baseline. Panchayats were then assigned to either treatment or control status using a random number generator.

JEEViKA began operating in the treatment panchayats of 3 districts in January 2012. Rollout was delayed for the other 4 districts, where baseline work for a parallel qualitative study was being conducted. JEEViKA moved into the remaining treatment panchayats in April 2012. After over two years of project activities in the treatment areas, the first follow-up survey began in July 2014 and is projected to be complete by early October, 2014. A second follow-up survey is planned to begin in July 2015.

*3. Approach to the analysis*

All hypotheses will be tested using a linear regression framework. The specification used to analyze a given outcome variable will depend on the degree of serial autocorrelation observed in that variable across survey rounds. Using the formulae presented in McKenzie (2012), the choice of a difference-in-differences versus ANCOVA specification for each variable will be made to maximize statistical power to detect a treatment effect on that variable.

For variables that are relatively uncorrelated over time, the outcome variable in the follow-up round will be regressed on a treatment status indicator, baseline value of the independent variable, and stratification variables (ANCOVA specification). For those in which the outcome is highly auto-correlated over time, the outcome variable (both pre- and post- intervention) is regressed on treatment status at that round, time dummies, and stratification variables (difference-in-differences specification). Additional baseline controls will be included in secondary specifications for both the ANCOVA and diff-in-diff models.

Stratification variables are the following:

- The panchayat mean of households’ outstanding high cost debt (loans with an annual interest greater than or equal to 48%) at baseline

- Block dummies

Controls to be included in the second specification are the following:

- Baseline values of all of the primary outcome variables (indicated with an asterisk below).

- Any other variables for which the difference in means between treatment and control groups differs from 0 at the 5% level of significance (after accounting for clustering at the panchayat level and controlling for stratification variables)

For analysis of village-level outcomes, village means of control variables will be used. Standard errors will be clustered at the panchayat level, which is the unit of randomization.

*Heterogeneous Treatment Effects:*

For all household outcomes, we will analyze the data for heterogeneous treatment effects by caste, landholdings at baseline, and residence in Kosi Division vs. other study areas.

*4. Household- Level Analysis:*

Participation: None of the higher order impacts of the JEEVIKA program would be realized if participation in self-help groups among households in treatment panchayats is not greater than among those in control panchayats (note that there are other SHG projects in Bihar).

We define participation in two ways: first, basic participation is defined as whether at least one member of the household was a member of an SHG at the time of the survey; second, active participation is defined as whether any household member either saved of obtained credit through an SHG in the past year.

**H1 (Basic participation):** The probability that at least one member of the household belongs to a SHG is significantly higher in treatment areas. (11.1 in the follow-up women’s questionnaire)\*

**H2 (Meaningful participation):** The probability that least one member of the household actively saves through an SHG is significantly higher in treatment areas. (8.C.2 in the follow-up HH questionnaire; 11B.4 in the follow-up women’s questionnaire)

Since one of the objectives of JEEVIKA is to inculcate a habit if savings, and since households may be linked to formal financial institutions through JEEVIKA, we will also test the impact of access to the program on whether the household saves, regardless of where savings are deposited.

**H3 (Savings):** The probability that a member of the household saved at all during the past year is higher in treatment areas. (8C.1 in the follow-up HH questionnaire, 11B.4 in the follow-up women’s questionnaire)\*

SHG participants are taught to sign their names so that they can handle financial transactions better. We should thus expect that signature literacy is higher in treatment areas; signature literacy may also lead to more awareness among women about basic signs like bus numbers, road signs, etc.

**H4 (Signature literacy):** Percentage of signature literate women is higher in treatment sample. (9A.11 in the follow-up women’s questionnaire)

**H5 (Basic literacy):** Percentage of women able to read basic signs such as phone/bus numbers, road signs is higher in treatment areas. (9A.12 in the follow-up women’s questionnaire)

Microcredit: Assuming that households in treatment areas do participate to a greater extent in SHGs, access to financial services (savings vehicles as well as credit) is expected to be the primary mechanism through which the program results in poverty reduction, given the lack of access formal credit or savings mechanisms, and cost of informal credit in the study area. Better access to financial services is expected to allow beneficiary households to smooth consumption during emergencies, reduce high cost existing debts and enable them to borrow for productive purposes. Additionally, given the lumpiness of pre-intervention informal borrowing, we may expect to see a higher number of loans in treatment areas, with a lower amount borrowed per loan compared to control areas. It is not clear a-priori whether the total debt burden should be higher in treatment areas (the cost of debt is lower so the price effect on debt is expected to be positive; on the other hand the positive wealth effect of access to lower cost credit is expected to have a negative effect on households’ outstanding debt burden). We do, however, anticipate that the program will affect the purpose for which loans are taken, with the share of loans used for investment (as opposed to consumption smoothing) increasing due to a positive wealth effect.

**H6 (High cost debt):** Percentage of households with any outstanding high cost loans (defined as loans with an annual interest rate of greater than or equal to 48%) is lower in treatment sample. (8B.13 B in the follow-up HH questionnaire)

**H7 (High cost debt):** Average total value of outstanding high-cost household debt is lower in treatment areas. (8B.13 B, 8B.14, 8B.15 in the follow-up HH questionnaire)\*

**H8 (Average interest rate):** Average annual rate of interest on cost household debt is lower in treatment areas. (8B.13 B, 8B.14, 8B.15 in the follow-up HH questionnaire)\*

**H9 (Number of loans):** Number of loans taken out over the past year is higher in treatment areas. (8B.4, 8B.5 in the follow-up HH questionnaire)

**H10 (Indebtedness):** Average total value of outstanding debt is lower in treatment areas. (8B.15 in the follow-up HH questionnaire)

**H11 (Consumption borrowing):** Amount borrowed for consumption purposes over the past year, as a percentage of the total borrowing during this period, is lower in treatment areas. (8B.1, 8B.2, 8B.4, 8B.5 in the follow-up HH questionnaire)

**H12 (Debt reduction borrowing):** Amount borrowed for debt reduction over the past year, as a percentage of the total borrowing during this period, is higher in treatment areas. (8B.1, 8B.2, 8B.4, 8B.5 in the follow-up HH questionnaire)

**H13 (Productive borrowing):** Amount borrowed for productive purposes over the past year, as a percentage of the total borrowing during this period, is higher in treatment areas. (8B.1, 8B.2, 8B.4, 8B.5 in the follow-up HH questionnaire)

Additionally, we may expect some general equilibrium effects. If participation in the program is high, and competition in the informal credit sector is imperfect, then access to cheap credit from SHGs should reduce the cost of borrowing from informal sources due to competitive effects, irrespective of whether a household contains an SHG member or not. On the other hand, the high cost of informal credit may reflect the risk premium that exists when a creditor does not know the risk profile of the borrower. Participation in an SHG (regular savings, regular borrowing and regular repayment) could serve as a signal to informal creditors about a lower risk profile. If this is the case, we may expect that SHG members are charged a lower interest rate when they borrow from informal sources than non-SHG members; indeed, non-SHG members may see their cost of borrowing increase as lack of participation serves as a negative signal to creditors in areas where SHG membership is widespread.

**H14 (Cost of borrowing – competition):** Interest rates paid to informal lenders on loans taken out during the past year are lower, on average, in treatment areas, irrespective of whether any household members belong to an SHG. (8B.3, 8B.4, 8B.13, 8B.14 in the follow-up HH questionnaire)

**H15 (Cost of borrowing – signaling):** In treatment areas, interest rates paid to informal lenders on loans taken out during the past year are lower, on average, among households in which at least one member belongs to an SHG; the difference in interest rates among these groups is larger in treatment areas than in control areas. (8B.3, 8B.4, 8B.13, 8B.14 in the follow-up HH questionnaire; 11.1 in the follow-up women’s questionnaire)

Livelihood Opportunities: JEEVIKA aims to provide a basket of livelihood opportunities to beneficiary households through the VOs. However, this takes place only after the VOs are well enough established to take up livelihood interventions on a demand driven basis. VOs usually form one year after initial entry into a village, which leaves JEEVIKA about 1-1.5 years to design interventions according to demand. Better access to credit may also enable households to diversify their income-generating activities, or to concentrate their activities in those activities which are most profitable. Because JEEVIKA specifically targets women, who are less likely to be engaged in income-generating activities at baseline, the proportion of adult women household members engaged in income-generating activities may increase as a result of the program. Availability of income-generating opportunities may vary seasonally, thus in addition to comparing activities over the entire year, we will also compare activities in each season.

**H16 (Livelihood diversification):** Households engaged in a larger number of income generating activities over the past year in treatment areas.

**H17 (Women’s labor force participation):** Proportion of adult women involved in income generating activities over the past year is higher in treatment areas.\*

**H18 (Women’s seasonal labor force participation):** Proportion of adult women involved in income generating activities by season over the past year is higher in treatment areas.

Asset Position: Both the microfinance and livelihoods interventions are expected to result in beneficiary households accumulating assets at a faster rate. Additionally, given Bihar’s agricultural landscape, and high landlessness, one could expect that these interventions promote leasing in of agricultural lands.

**H19 (Productive assets):** An index of productive asset ownership is higher in the treatment sample. (Section 6A in the follow-up HH questionnaire)\*

**H20 (Consumption assets):** An index of consumption asset ownership is higher in the treatment sample. (Section 6B in the follow-up HH questionnaire)\*

**H21 (Housing quality):** Quality of housing is higher in treatment sample. (Section 4 in the follow-up HH questionnaire)\*

**H22 (Assets):** Amount of land leased in for cultivation is higher in the treatment sample. (511A in the follow-up HH questionnaire)

Access to other government schemes: JEEVIKA creates a platform through which households can voice demands related to various government schemes like pensions, NREGS employment, PDS rations, health and life insurance, which are provided by the relevant government departments usually through the panchayats. Although JEEVIKA cannot ensure the supply of such schemes, one may expect better service delivery due to increased demand.

**H23 (Entitlements):** Households’ likelihood of access to one or more government schemes such as NREGS employment, pensions from panchayat and PDS cards is higher in the treatment sample.\*

Empowerment: By providing microfinance services to women, through a curriculum aimed at enhancing women’s voice both within and outside of the household, and through the expansion of women’s social networks, JEEVIKA is expected to positively affect the empowerment of women.

**H24 (Mobility):** An index of women’s mobility (ability to travel alone or accompanied) to the village grocery store, health center, banks, post office, panchayat and group meetings and friend or relative outside the village is higher in treatment areas. (Section 9B in the follow-up women’s questionnaire)\*

**H25 (HH decision-making):** An index of participation in household level decision making (regarding purchase of durable goods and personal items, migration, labor activities, politics, education and borrowing) is higher in treatment areas. (Section 9C in the follow-up women’s questionnaire)\*

**H26 (Collective action):** Women’s propensity to participate in collective action (to solve issues related to public services, domestic violence and alcoholism) is higher in treatment sample. (Section 9E in the follow-up women’s questionnaire)\*

**H27 (Aspirations):** Aspirations for children in general, and particularly for girls (educational attainment, profession) are higher in treatment areas. (Section 6D in the follow-up women’s questionnaire)\*

**H28 (Political awareness):** Women’s political awareness (ability to name India’s Prime Minister and Bihar’s chief minister) is higher in treatment areas (9A.13 and 9A.14 in the follow-up women’s questionnaire)

**H29 (Political participation):** Probability that a woman voted or ran in recent elections, serves on a panchayat committee, or aspires to stand for public office is higher in treatment areas (9A.15 – 9A.25 in the follow-up women’s questionnaire)

**H30 (Social networks):** Women are more likely to confide in or seek help from social contacts outside of the household in treatment areas. (Section 9F in the follow-up women’s questionnaire)

Consumption: We expect total per-capita consumption to be greater in treatment areas, leading to higher consumption of nutritious items such as vegetables, pulses and meat products. Consumption of ‘sin’ goods typically not consumed by women, such as alcohol and tobacco, may decrease due to women’s increased bargaining power in the household (or could increase if the income effect outweighs the bargaining effect). We may also expect greater investments in children’s education, and higher spending on assignable female goods, as compared to assignable male goods.

**H31 (Consumption):** Value of total consumption per adult equivalent is higher in treatment areas. (Section 10 in the follow-up women’s questionnaire)\*

**H32 (Diet quality):** Per-adult equivalent consumption value of non-staple, nutritious food items (vegetables, pulses, animal-sourced foods) is higher in treatment areas.

**H33 (Food expenditure):** Per-adult equivalent consumption value of higher unit-cost food items is higher in treatment areas.

**H34 (Food quality):** Per-adult equivalent consumption of low-unit cost staples is lower in treatment areas. (Section 10 in the follow-up women’s questionnaire)

**H35 (Sin goods):** Consumption of sin goods (alcohol, tobacco) is lower in treatment areas.

**H36 (Education):** Investment in children’s education is higher in treatment areas. (10.4 codes 1, 2, 3 in the follow-up women’s questionnaire)

**H37 (Private goods):** Expenditure on women’s assignable goods relative to expenditure on men’s assignable goods is higher in treatment areas.

Subjective well-being: Through effects on access to financial services, income-generating opportunities, and empowerment, JEEVIKA is expected to positively affect the subjective well-being of women.

**H38 (Subjective well-being):** Women’s subjective well-being is higher in treatment areas (Sections 9G and 9H in the follow-up women’s questionnaire)

*5. Village Level Analysis:*

Due to the institutional approach of JEEVIKA, changes in the extent of the civic participation and mutual support are be expected. Awareness about government schemes, willingness to engage in collective action to ensure service delivery, and a greater sense of collective efficacy should materialize when women are mobilized into village wide institutions. The following hypotheses will be tested using data from community-level surveys (conducted in two sessions, one general and one for women specifically):

**H39 (Collective action - completed):** Conditional on problems with a particular amenity, the proportion of villages in which women have acted to resolve the problem(s) is higher in treatment areas. (Follow-up women’s community survey, Section 2)

**H40 (Collective action - planned):** Given continuing problems with a particular amenity, the proportion of villages in which women are planning to act is higher in treatment areas. (Follow-up women’s community survey, Section 2)

**H41 (Mutual support):** The proportion of villages in which women report receiving assistance from others in the village is higher in treatment areas. (Follow-up women’s community survey, Section 3)

## Appendix B: Power calculations

Power calculations based on a sample size of 9000 households clustered on 180 panchayats. Power calculations were performed for a broad range of ICCs due to uncertainty about how the intervention would affect to correlation of outcome variable within clusters. For each outcome and (sub-)sample, the minimum of this range was set at approximately double the ICC at baseline, since it was expected that variation in the quality of teams would introduce significant geographic correlation in the quality of the intervention and thus key outcome variables, and the upper limit was set to 2.5 times this value. For the binary outcome (SHG membership), minimum detectable differences are specified for both increases and decreases in levels relative to control means and proportions. Control level ranges and standard deviations used for this analysis are based on baseline statistics for the full sample and landless sub-sample, respectively.

***Full sample:*** 50 obs/cluster, 90 clusters/group

*Self-help Group Membership (binary)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ICC | 0.2 | | 0.35 | | 0.5 | |
| Control level | MDE (+) | MDE (-) | MDE (+) | MDE (-) | MDE (+) | MDE (-) |
| 0.02 | 0.04 | 0.02 | 0.05 | 0.02 | 0.07 | 0.03 |
| 0.04 | 0.05 | 0.03 | 0.07 | 0.04 | 0.08 | 0.04 |
| 0.06 | 0.05 | 0.04 | 0.07 | 0.05 | 0.09 | 0.05 |
| 0.08 | 0.06 | 0.05 | 0.08 | 0.06 | 0.10 | 0.06 |
| 0.1 | 0.07 | 0.05 | 0.09 | 0.06 | 0.11 | 0.07 |
| 0.12 | 0.07 | 0.06 | 0.09 | 0.07 | 0.11 | 0.08 |

*High-cost debt (000 Rs)*

|  |  |  |  |
| --- | --- | --- | --- |
| ICC | 0.07 | 0.1225 | 0.175 |
|  | MDE | MDE | MDE |
| Control: 7.64 | 1.50 | 1.89 | 2.21 |

***Landless Sub-sample:*** Average 36 obs/cluster, 90 clusters/group

*Self-help Group Membership (binary)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ICC | 0.25 | | 0.4375 | | 0.625 | |
| Control level | MDE (+) | MDE (-) | MDE (+) | MDE (-) | MDE (+) | MDE (-) |
| 0.02 | 0.04 | 0.02 | 0.06 | 0.02 | 0.08 | 0.03 |
| 0.04 | 0.05 | 0.03 | 0.07 | 0.04 | 0.09 | 0.04 |
| 0.06 | 0.06 | 0.04 | 0.08 | 0.05 | 0.10 | 0.06 |
| 0.08 | 0.07 | 0.05 | 0.09 | 0.06 | 0.11 | 0.07 |
| 0.1 | 0.07 | 0.06 | 0.10 | 0.07 | 0.12 | 0.08 |
| 0.12 | 0.08 | 0.06 | 0.11 | 0.08 | 0.13 | 0.09 |

*High-cost debt (000 Rs)*

|  |  |  |  |
| --- | --- | --- | --- |
| ICC | 0.09 | 0.1575 | 0.225 |
|  | MDE | MDE | MDE |
| Control: 7.68 | 1.55 | 1.94 | 2.27 |

## Appendix C: Descriptive statistics

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table C1. Summary Statistics and Randomization Balance across Treatment Groups at Baseline** | | | | | | | | | | | | | | | | | |
|  | Means | | | | | | |  | | Difference in means, T-C (SE), Adjusted for stratification controls | | | | | | | |
|  | *Obs* | *Overall* |  | *Control* | | *Treatment* | | |  | | *Full sample* |  | *Landless* |  | *Landed* | | | |
|  |  |  | | (1) |  | (2) |  | (3) | | | |
|  |  |  |  |  |  |  |  | |  | |  | | |  |  |  |  | |
| ***Household Characteristics*** | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  | |  | | |  |  |  |  | |
| Caste (SC/ST) | 8988 | 71.91 |  | 71.77 | % | 72.05 | % | |  | | 0.30 |  | -0.28 |  | -0.93 | | | |
|  |  |  |  |  |  |  |  | |  | | (1.38) |  | (1.40) |  | (2.80) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Land Ownership | 8988 | 28.73 |  | 29.63 | % | 27.82 | % | |  | | -1.94\* |  | NA |  | NA | | | |
|  |  |  |  |  |  |  |  | |  | | (1.12) |  |  |  |  | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Household Size | 8988 | 5.95 |  | 5.96 |  | 5.93 |  | |  | | -0.04 |  | -0.00 |  | -0.10 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.05) |  | (0.06) |  | (0.10) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Female HH Head | 8988 | 16.31 |  | 16.56 | % | 16.06 | % | |  | | -0.34 |  | -0.48 |  | -0.57 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.90) |  | (1.18) |  | (1.31) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| ***Self Help Groups, Savings and Debt*** | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  | |  | | |  |  |  |  | |
| SHG membership (†) | 8988 | 6.19 |  | 5.14 | % | 7.25 | % | |  | | 2.48\*\*\* |  | 2.92\*\*\* |  | 1.34 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.81) |  | (0.99) |  | (1.07) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Any Savings? (†) | 8988 | 37.07 |  | 35.63 | % | 38.53 | % | |  | | 3.28\* |  | 3.42 |  | 3.60 | | | |
|  |  |  |  |  |  |  |  | |  | | (1.93) |  | (2.16) |  | (2.48) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| High cost debt (000 Rs) (Real) (†) | 8988 | 7.64 |  | 7.67 |  | 7.61 |  | |  | | -0.03 |  | 0.19 |  | -0.59 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.08) |  | (0.19) |  | (0.44) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Total Debt (000 Rs.) (Real) | 8988 | 10.09 |  | 10.24 |  | 9.93 |  | |  | | -0.31 |  | 0.01 |  | -0.83 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.20) |  | (0.28) |  | (0.76) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Outstanding Informal Debt (000 Rs.) (Real) | 8988 | 9.05 |  | 9.07 |  | 9.02 |  | |  | | -0.02 |  | 0.00 |  | 0.05 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.16) |  | (0.25) |  | (0.56) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Outstanding SHG Debt (000 Rs.) (Real) | 8988 | 0.07 |  | 0.05 |  | 0.10 |  | |  | | 0.06\*\*\* |  | 0.03 |  | 0.13\*\*\* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.02) |  | (0.02) |  | (0.05) | | | |
|  |  |  |  |  |  |  |  | |  | |  | | |  |  |  |  | |
| ***Credit Markets: Interest Rates and Number of Informal Lenders per Village*** | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  | |  | | |  |  |  |  | |
| Mean monthly interest rate paid (†) | 6462 | 5.33 |  | 5.27 |  | 5.39 |  | |  | | 0.13\*\* |  | 0.15\*\* |  | 0.04 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.05) |  | (0.06) |  | (0.08) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Mean monthly rate, informal loans | 6391 | 5.34 |  | 5.28 |  | 5.41 |  | |  | | 0.13\*\* |  | 0.15\*\* |  | 0.03 | | | |
|  |  |  |  |  |  |  |  | |  | | (0.05) |  | (0.06) |  | (0.08) | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Mean rate, informal loans (Village FGD data) | 311 | 5.25 |  | 5.22 |  | 5.28 |  | |  | | 0.02 |  | *NA* |  | *NA* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.15) |  |  |  |  | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Number of informal lenders (FGD) | 180 | 2.04 |  | 2.08 |  | 1.99 |  | |  | | -0.03 |  | *NA* |  | *NA* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.09) |  |  |  |  | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Mean rate, moneylender loans (FGD) | 311 | 5.25 |  | 5.22 |  | 5.28 |  | |  | | 0.09 |  | *NA* |  | *NA* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.18) |  |  |  |  | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Number of moneylenders (FGD) | 180 | 2.04 |  | 2.08 |  | 1.99 |  | |  | | -0.06 |  | *NA* |  | *NA* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.05) |  |  |  |  | | | |
| Mean rate, friend/relative loans (FGD) | 311 | 5.25 |  | 5.22 |  | 5.28 |  | |  | | 0.07 |  | *NA* |  | *NA* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.24) |  |  |  |  | | | |
|  |  |  |  |  |  |  |  | |  | |  |  |  |  |  | | | |
| Number of friends/relatives offering loans (FGD) | 180 | 2.04 |  | 2.08 |  | 1.99 |  | |  | | 0.02 |  | *NA* |  | *NA* | | | |
|  |  |  |  |  |  |  |  | |  | | (0.07) |  |  |  |  | | | |
| *Notes:* Adjusted differences in means across treatment groups and their standard errors (clustered at the panchayat level) are from separate linear regressions of each baseline variable on an indicator of treatment status, with controls for stratification variables (block dummies and panchayat mean high cost debt). The result for outstanding high cost debt is from a regression with the same specification as described previously, excluding the control for baseline panchayat high cost debt in order to avoid over-fitting. Outcomes marked with † are primary outcomes of interest according to the pre-analysis plan, and are used as controls in later regressions as specified in the plan.  \* p<0.1, \*\* p<0.05; \*\*\* p<0.01 | | | | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table C1. Summary Statistics and Randomization Balance across Treatment Groups at Baseline (continued)** | | | | | | | | | | | | | |
|  | Means | | | | | | |  | Difference in means, T-C (SE), Adjusted for stratification controls | | | | |
|  | *Obs* | *Overall* |  | *Control* | | *Treatment* | |  | *Full sample* |  | *Landless* |  | *Landed* |
|  |  |  | (1) |  | (2) |  | (3) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Productive asset index (†) | 8988 | 0.14 |  | 0.18 |  | 0.09 |  |  | -0.10\*\*\* |  | -0.03 |  | -0.19 |
|  |  |  |  |  |  |  |  |  | (0.04) |  | (0.04) |  | (0.12) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Consumption asset index (†) | 8988 | -0.24 |  | -0.27 |  | -0.21 |  |  | 0.06 |  | 0.13\*\* |  | -0.01 |
|  |  |  |  |  |  |  |  |  | (0.05) |  | (0.05) |  | (0.08) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Housing quality index (†) | 8988 | -0.12 |  | -0.12 |  | -0.12 |  |  | 0.02 |  | 0.02 |  | 0.02 |
|  |  |  |  |  |  |  |  |  | (0.03) |  | (0.04) |  | (0.07) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Consumption value per AE (†) | 8988 | 0.69 |  | 0.68 |  | 0.69 |  |  | 0.01 |  | 0.01 |  | 0.00 |
|  |  |  |  |  |  |  |  |  | (0.01) |  | (0.01) |  | (0.01) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Entitlements accessed by HH (†) | 8988 | 66.59 |  | 66.05 | % | 67.13 | % |  | 1.40 |  | 0.88 |  | 1.13 |
|  |  |  |  |  |  |  |  |  | (1.33) |  | (1.37) |  | (2.28) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Women's Roles and Capabilities*** | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prop. HH women work for income (†) | 8985 | 77.08 |  | 77.68 | % | 76.47 | % |  | -1.31 |  | -1.75 |  | -1.01 |
|  |  |  |  |  |  |  |  |  | (1.12) |  | (1.16) |  | (2.00) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Women's HH decision-making index (†) | 8988 | 5.97 |  | 5.98 |  | 5.97 |  |  | -0.00 |  | 0.06 |  | -0.16\*\* |
|  |  |  |  |  |  |  |  |  | (0.05) |  | (0.06) |  | (0.08) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Women's collective action index (†) | 8988 | 81.70 |  | 81.93 | % | 81.46 | % |  | -0.11 |  | 0.47 |  | -1.48 |
|  |  |  |  |  |  |  |  |  | (0.97) |  | (1.20) |  | (1.74) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Women's mobility (†) | 8303 | 0.31 |  | 0.30 |  | 0.31 |  |  | 0.01 |  | 0.00 |  | 0.02 |
|  |  |  |  |  |  |  |  |  | (0.01) |  | (0.02) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aspirations for girls (†) | 5235 | 28.75 |  | 28.00 | % | 29.48 | % |  | 1.38 |  | 2.67 |  | -1.13 |
|  |  |  |  |  |  |  |  |  | (1.41) |  | (1.63) |  | (2.75) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Attrition*** | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Attrition | 8988 | 2.89 |  | 2.83 | % | 2.95 | % |  | 0.15 |  | 0.18 |  | 0.05 |
|  |  |  |  |  |  |  |  |  | (0.28) |  | (0.39) |  | (0.57) |
| *Notes:* Adjusted differences in means across treatment groups and their standard errors (clustered at the panchayat level) are from separate linear regressions of each baseline variable on an indicator of treatment status, with controls for stratification variables (block dummies and panchayat mean high cost debt). The result for outstanding high cost debt is from a regression with the same specification as described previously, excluding the control for baseline panchayat high cost debt in order to avoid over-fitting. Outcomes marked with † are primary outcomes of interest according to the pre-analysis plan, and are used as controls in later regressions as specified in the plan.  \* p<0.1, \*\* p<0.05; \*\*\* p<0.01 | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table C2: Endline Summary Statistics** | | | | | | | | |  |
|  | Means | | | | | | | | |
|  | Treatment | | | |  | Control | | | |
|  | *Obs* | *Mean* | *Std Dev* | *ICC* |  | *Obs* | *Mean* | *Std Dev* | *ICC* |
|  |  |  |  |  |  |  |  |  |  |
| *Primary Outcomes* |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| SHG Membership (%) | 4416 | 0.62 | 0.49 | 0.08 |  | 4416 | 0.1 | 0.30 | 0.20 |
|  |  |  |  |  |  |  |  |  |  |
| Any Loans Taken in the last year? | 4471 | 0.78 | 0.42 | 0.06 |  | 4516 | 0.74 | 0.44 | 0.05 |
|  |  |  |  |  |  |  |  |  |  |
| Outstanding Debt (All Loans, 000 Rs.) | 4471 | 17 | 24.63 | 0.01 |  | 4516 | 17.94 | 26.10 | 0.02 |
|  |  |  |  |  |  |  |  |  |  |
| Outstanding Debt (SHG Loans, 000 Rs.) | 4471 | 2.11 | 4.32 | 0.05 |  | 4516 | 0.13 | 1.12 | 0.09 |
|  |  |  |  |  |  |  |  |  |  |
| Outstanding Debt (High cost - ≥ 4% / month, 000 Rs.) | 4471 | 11.11 | 17.26 | 0.04 |  | 4516 | 12.97 | 18.52 | 0.03 |
|  |  |  |  |  |  |  |  |  |  |
| Interest Rates (monthly rate on new loans) | 3481 | 4.79 | 2.12 | 0.12 |  | 3324 | 5.69 | 2.03 | 0.19 |
|  |  |  |  |  |  |  |  |  |  |
| Total New Loans taken in the last year (000 Rs.) | 4471 | 11.34 | 16.36 | 0.02 |  | 4516 | 11.5 | 19.18 | 0.01 |
|  |  |  |  |  |  |  |  |  |  |
| SHG New Loans taken in the last year (000 Rs.) | 4471 | 2.11 | 4.45 | 0.05 |  | 4516 | 0.13 | 2.32 | 0.02 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| *Secondary Outcomes (Informal Credit)* |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Any Informal Loans Taken? | 4471 | 0.66 | 0.47 | 0.07 |  | 4516 | 0.72 | 0.45 | 0.05 |
|  |  |  |  |  |  |  |  |  |  |
| Outstanding Informal Debt (000 Rs.) | 4471 | 13.61 | 21.07 | 0.02 |  | 4516 | 16.24 | 23.32 | 0.02 |
|  |  |  |  |  |  |  |  |  |  |
| New Informal Loans Taken (000 Rs.) | 4471 | 9.1 | 15.42 | 0.02 |  | 4516 | 11.14 | 18.81 | 0.02 |
|  |  |  |  |  |  |  |  |  |  |
| Informal interest rate | 2951 | 5.66 | 1.93 | 0.17 |  | 3260 | 5.75 | 1.99 | 0.20 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| *Downstream Outcomes I (Assets, Entitlements, Consumption)* |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Consumption Asset Index | 4471 | 0.3 | 1.71 | 0.11 |  | 4516 | 0.18 | 1.64 | 0.13 |
|  |  |  |  |  |  |  |  |  |  |
| Productive Asset Index | 4471 | -0.16 | 1.20 | 0.04 |  | 4516 | -0.11 | 1.35 | 0.05 |
|  |  |  |  |  |  |  |  |  |  |
| Housing Quality Index | 4471 | 0.13 | 1.29 | 0.12 |  | 4516 | 0.11 | 1.26 | 0.07 |
|  |  |  |  |  |  |  |  |  |  |
| Access to Entitlements | 4471 | 0.94 | 0.23 | 0.06 |  | 4516 | 0.94 | 0.23 | 0.04 |
|  |  |  |  |  |  |  |  |  |  |
| Real Consumption per AE (000 Rs.) | 4471 | 0.96 | 0.84 | 0.02 |  | 4516 | 0.95 | 0.85 | 0.03 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| *Downstream Outcomes II (Women's roles, Capabilities)* |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Proportion HH women work for income (%) | 4394 | 0.72 | 0.41 | 0.07 |  | 4439 | 0.73 | 0.40 | 0.04 |
|  |  |  |  |  |  |  |  |  |  |
| Women's decision-making in HH index | 4406 | 6.21 | 1.25 | 0.09 |  | 4435 | 6.27 | 1.20 | 0.13 |
|  |  |  |  |  |  |  |  |  |  |
| Women's collective action index | 4406 | 0.9 | 0.31 | 0.05 |  | 4435 | 0.87 | 0.33 | 0.10 |
|  |  |  |  |  |  |  |  |  |  |
| Women's Mobility | 3947 | 0.51 | 0.31 | 0.09 |  | 4082 | 0.51 | 0.33 | 0.07 |
|  |  |  |  |  |  |  |  |  |  |
| Aspirations for girls | 2081 | 0.31 | 0.46 | 0.06 |  | 2009 | 0.3 | 0.46 | 0.05 |
|  |  |  |  |  |  |  |  |  |  |
| ICC is Intra Cluster Correlation | | | | | | | | | |

|  |  |
| --- | --- |
| **Table C3: Summary of Results** | |
|  | Direction of Impact |
|  |  |
|  |  |
| ***Primary Outcomes*** |  |
|  |  |
| SHG Membership (%) | **+** |
| Any Loans Taken in the last year? | **+** |
| Outstanding Debt (All Loans, 000 Rs.) | **-** |
| Outstanding Debt (SHG Loans, 000 Rs.) | **+** |
| Outstanding Debt (High cost - ≥ 4% / month, 000 Rs.) | **-** |
| Interest Rates (monthly rate on new loans) | **-** |
| Total New Loans taken in the last year (000 Rs.) | No Impact |
| SHG New Loans taken in the last year (000 Rs.) | **+** |
|  |  |
| ***Secondary Outcomes (Informal Credit)*** |  |
| Any Informal Loans Taken? | **-** |
| Outstanding Informal Debt (000 Rs.) | **-** |
| New Informal Loans Taken (000 Rs.) | **-** |
| Informal interest rate | **-** |
|  |  |
| ***Downstream Outcomes I (Assets, Entitlements, Consumption)*** | |
| Consumption Asset Index | No Impact |
| Productive Asset Index | No Impact |
| Housing Quality Index | No Impact |
| Access to Entitlements | No Impact |
| Real Consumption per AE (000 Rs.) | No Impact |
|  |  |
| ***Downstream Outcomes II (Women's roles, Capabilities)*** |  |
| Proportion HH women work for income (%) | No Impact |
| Women's decision-making in HH index | - |
| Women's collective action index | + |
| Women's Mobility | No Impact |
| Aspirations for girls | No Impact |
|  |  |

## Appendix D: Results - Robustness Checks

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table D1. Direct Effects, alternative estimators** | | | | | | | | | | | | |
|  | SHG membership (%) |  | Any loans taken |  | Loans taken past year (000 Rs) | |  | Outstanding debt (000 Rs) | | |  | Monthly rate on loans taken last 12 months |
|  |  | All loans |  | All loans | SHG loans |  | Total | SHG | > 4% /mo |  | All loans |
|  | (1) |  | (2) |  | (3) | (4) |  | (5) | (6) | (7) |  | (8) |
|  | *Panel A: Simple Difference Estimator, no Baseline Controls* | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Overall Jeevika impact | 51.36\*\*\* |  | 0.04\*\*\* |  | -0.12 | 1.93\*\*\* |  | -0.88\* | 1.99\*\*\* | -1.80\*\*\* |  | -0.98\*\*\* |
|  | (1.55) |  | (0.01) |  | (0.33) | (0.10) |  | (0.45) | (0.09) | (0.39) |  | (0.07) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impact on landholding HHs | 43.03\*\*\* |  | 0.06\*\*\* |  | -1.80\*\* | 1.68\*\*\* |  | -2.71\* | 1.69\*\*\* | -1.61\* |  | -0.69\*\*\* |
|  | (2.31) |  | (0.02) |  | (0.83) | (0.16) |  | (1.40) | (0.14) | (0.91) |  | (0.12) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impact on landless HHs | 54.52\*\*\* |  | 0.04\*\* |  | 0.61 | 2.03\*\*\* |  | 0.09 | 2.10\*\*\* | -1.84\*\*\* |  | -1.08\*\*\* |
|  | (1.61) |  | (0.01) |  | (0.40) | (0.11) |  | (0.51) | (0.10) | (0.46) |  | (0.08) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Panel B: Simple Difference Estimator with Baseline Controls* | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Overall Jeevika impact | 51.36\*\*\* |  | 0.04\*\*\* |  | -0.21 | 1.91\*\*\* |  | -0.93\*\* | 1.97\*\*\* | -1.88\*\*\* |  | -1.00\*\*\* |
|  | (1.55) |  | (0.01) |  | (0.32) | (0.10) |  | (0.43) | (0.09) | (0.38) |  | (0.07) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impact on landholding HHs | 42.97\*\*\* |  | 0.06\*\*\* |  | -1.65\*\* | 1.68\*\*\* |  | -2.32\* | 1.70\*\*\* | -1.46 |  | -0.72\*\*\* |
|  | (2.25) |  | (0.02) |  | (0.81) | (0.16) |  | (1.35) | (0.15) | (0.89) |  | (0.12) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impact on landless HHs | 54.25\*\*\* |  | 0.04\*\* |  | 0.39 | 2.00\*\*\* |  | -0.28 | 2.07\*\*\* | -2.04\*\*\* |  | -1.09\*\*\* |
|  | (1.61) |  | (0.01) |  | (0.40) | (0.12) |  | (0.50) | (0.10) | (0.46) |  | (0.08) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Panel C: Difference in Differences Estimator* | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Overall Jeevika impact | 49.09\*\*\* |  | 2.26 |  | -0.04 | 1.88\*\*\* |  | -0.63 | 1.93\*\*\* | -1.79\*\*\* |  | -1.04\*\*\* |
|  | (2.54) |  | (1.73) |  | (0.51) | (0.14) |  | (0.69) | (0.12) | (0.56) |  | (0.12) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impact on landholding HHs | 40.89\*\*\* |  | 4.61\* |  | -1.65 | 1.57\*\*\* |  | -1.93 | 1.54\*\*\* | -1.10 |  | -0.56\*\*\* |
|  | (2.96) |  | (2.72) |  | (1.10) | (0.18) |  | (1.62) | (0.17) | (1.10) |  | (0.16) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impact on landless HHs | 52.19\*\*\* |  | 1.35 |  | 0.63 | 2.00\*\*\* |  | -0.00 | 2.08\*\*\* | -2.04\*\*\* |  | -1.19\*\*\* |
|  | (2.78) |  | (1.91) |  | (0.50) | (0.15) |  | (0.65) | (0.14) | 0.60 |  | (0.14) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Notes:* All specifications control for stratification dummies. Results shown in Panel B are from specifications in which baseline controls (Table A1) are included. | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table D2. Effects on Informal Credit Market, alternative estimators** | | | | | | | | |
|  | Any informal loans taken |  | Informal loans taken past year (000 Rs) |  | Outstanding informal debt (000 Rs) |  | Monthly rate, informal loans taken last 12 months |
|  | (1) |  | (2) |  | (3) |  | (4) |
|  | *Panel A: Simple Difference Estimator, no Baseline Controls* | | | | | | | |
|  |  |  |  |  |  |  |  |
| Overall Jeevika impact | -0.06\*\*\* |  | -2.00\*\*\* |  | -2.58\*\*\* |  | -0.11 |
|  | (0.01) |  | (0.32) |  | (0.40) |  | (0.07) |
|  |  |  |  |  |  |  |  |
| Impact on landholding HHs | -0.04\* |  | -3.27\*\*\* |  | -3.54\*\*\* |  | 0.07 |
|  | (0.02) |  | (0.79) |  | (1.11) |  | (0.11) |
|  |  |  |  |  |  |  |  |
| Impact on landless HHs | -0.07\*\*\* |  | -1.43\*\*\* |  | -2.06\*\*\* |  | -0.19\*\* |
|  | (0.01) |  | (0.39) |  | (0.50) |  | (0.09) |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | *Panel B: Simple Difference Estimator with Baseline Controls* | | | | | | | |
|  |  |  |  |  |  |  |  |
| Overall Jeevika impact | -0.06\*\*\* |  | -2.06\*\*\* |  | -2.65\*\*\* |  | -0.12\* |
|  | (0.01) |  | (0.30) |  | (0.38) |  | (0.07) |
|  |  |  |  |  |  |  |  |
| Impact on landholding HHs | -0.04\*\* |  | -3.12\*\*\* |  | -3.29\*\*\* |  | 0.05 |
|  | (0.02) |  | (0.77) |  | (1.08) |  | (0.10) |
|  |  |  |  |  |  |  |  |
| Impact on landless HHs | -0.07\*\*\* |  | -1.61\*\*\* |  | -2.34\*\*\* |  | -0.19\*\* |
|  | (0.01) |  | (0.38) |  | (0.48) |  | (0.08) |
|  |  |  |  |  |  |  |  |
|  | *Panel C: Difference in Differences Estimator* | | | | | | | |
|  |  |  |  |  |  |  |  |
| Overall Jeevika impact | -7.92\*\*\* |  | -1.96\*\*\* |  | -2.58\*\*\* |  | -0.22\* |
|  | (1.70) |  | (0.50) |  | (0.63) |  | (0.12) |
|  |  |  |  |  |  |  |  |
| Impact on landholding HHs | -5.00\* |  | -3.42\*\*\* |  | -3.64\*\*\* |  | 0.13 |
|  | (2.76) |  | (1.03) |  | (1.30) |  | (0.16) |
|  |  |  |  |  |  |  |  |
| Impact on landless HHs | -9.05\*\*\* |  | -1.33\*\* |  | -2.07\*\*\* |  | -0.34\*\* |
|  | (1.87) |  | (0.49) |  | (0.65) |  | (0.14) |
|  |  |  |  |  |  |  |  |
| *Notes:* All specifications control for stratification dummies. Results shown in Panel B are from specifications in which baseline controls (Table A1) are included. | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table D3. Effects on Household Asset position, Entitlements, and Welfare** | | | | | | | | | |
|  | Consumption Asset Index |  | Productive Asset Index |  | Housing Quality Index |  | Access to Entitlements (% any) |  | Real Consumption per AE (000 Rs.) |
|  | (1) |  | (2) |  | (3) |  | (4) |  | (5) |
|  | *Panel A: Simple Difference Estimator, no Baseline Controls* | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |
| Overall Jeevika impact | 0.13\*\* |  | -0.05 |  | 0.02 |  | -0.14 |  | 0.01 |
|  | (0.06) |  | (0.03) |  | (0.04) |  | (0.48) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |
| Impact on landholding HHs | -0.07 |  | -0.20\* |  | -0.08 |  | -0.43 |  | -0.02 |
|  | (0.09) |  | (0.10) |  | (0.07) |  | (1.11) |  | (0.04) |
|  |  |  |  |  |  |  |  |  |  |
| Impact on landless HHs | 0.24\*\*\* |  | 0.03 |  | 0.08\*\* |  | -0.15 |  | 0.02 |
|  | (0.06) |  | (0.03) |  | (0.04) |  | (0.55) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  | *Panel B: Simple Difference Estimator with Baseline Controls* | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |
| Overall Jeevika impact | 0.10\*\* |  | -0.01 |  | 0.01 |  | -0.18 |  | 0.00 |
|  | (0.04) |  | (0.02) |  | (0.03) |  | (0.43) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |
| Impact on landholding HHs | -0.07 |  | -0.13 |  | -0.09\* |  | -0.44 |  | -0.01 |
|  | (0.07) |  | (0.08) |  | (0.06) |  | (1.02) |  | (0.04) |
|  |  |  |  |  |  |  |  |  |  |
| Impact on landless HHs | 0.18\*\*\* |  | 0.04\* |  | 0.06\* |  | -0.09 |  | 0.01 |
|  | (0.05) |  | (0.02) |  | (0.03) |  | (0.52) |  | (0.02) |
|  |  |  |  |  |  |  |  |  |  |
|  | *Panel C: Difference in Differences Estimator* | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |
| Overall Jeevika impact | 0.07 |  | 0.04 |  | 0.02 |  | -1.21 |  | -0.01 |
|  | (0.07) |  | (0.04) |  | (0.04) |  | (1.67) |  | (0.03) |
|  |  |  |  |  |  |  |  |  |  |
| Impact on landholding HHs | -0.03 |  | 0.01 |  | -0.10 |  | -0.86 |  | -0.03 |
|  | (0.10) |  | (0.12) |  | (0.07) |  | (2.48) |  | (0.04) |
|  |  |  |  |  |  |  |  |  |  |
| Impact on landless HHs | 0.10 |  | 0.04 |  | 0.07 |  | -0.87 |  | 0.01 |
|  | (0.07) |  | (0.03) |  | (0.04) |  | (1.65) |  | (0.03) |
|  |  |  |  |  |  |  |  |  |  |
| *Notes:* All specifications control for stratification dummies. Results shown in Panel B are from specifications in which baseline controls (Table A1) are included. | | | | | | | | | |

## Appendix E: Program costs

Total program cost for 6 districts: 199.5 million USD

From Bank as Credit: 156.27 million USD

From Govt. of Bihar as grant: 43.23 million USD.

Operating costs through the government covered training, setup, and project management costs (including salaries, infrastructure and surveys for project monitoring).

Outputs completed with this funding were: 18,36,505 members enrolled in 1,55,636 SHGs, 10,445 VOs and 225 CLFs.

*Source: Bihar Rural Livelihoods Project Implementation Completion Report*

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1. Report prepared by Eric Yen, Vaishnavi Surendra, and Vivian Hoffmann, with input from Biju Rao and Paromita Sanyal. [↑](#footnote-ref-1)
2. National Rural Livelihoods Mission, Ministry of Rural Development, India. http://nrlm.gov.in/ [↑](#footnote-ref-2)
3. The NRLM was succeeded in 2015 by Deen Dayal Upadhyaya Antyodaya Yojana, whose mandate extends to the urban poor. [↑](#footnote-ref-3)
4. Administrative sub-division in India, below a district. Also known as a Tehsil in certain Indian states. [↑](#footnote-ref-4)
5. See https://www.socialscienceregistry.org/trials/570 [↑](#footnote-ref-5)
6. http://www.brlp.in [↑](#footnote-ref-6)
7. Panchayats are local governance units typically consisting of between two and four villages; blocks are the next level above panchayats in the Indian administrative hierarchy. [↑](#footnote-ref-7)
8. Household were not permitted to have more than one member in a Jeevika SHG, but membership by a second member in a non-Jeevika SHG was possible. [↑](#footnote-ref-8)
9. This method is similar to Barron, Woolcok, and Diprose’s (2011) sociological analysis of the impact of a development intervention in Indonesia. [↑](#footnote-ref-9)
10. Groups of formerly “untouchable” castes that are included in a “schedule” of the Indian Constitution in recognition of their historic marginalization and subordination. [↑](#footnote-ref-10)
11. Participatory rural appraisal methods are simple mapping, graphics and other analytical tools that are used in development interventions to allow largely illiterate populations to reveal information about their living conditions within focus group settings. [↑](#footnote-ref-11)
12. Area Coordinators report to Block Project Managers. Community Coordinators, who report to Area Coordinators, represent the most grassroots staff of the project. [↑](#footnote-ref-12)
13. BPM and former AC, Cycle 4, Saifpur. [↑](#footnote-ref-13)
14. DTO and former AC, Cycle 3, Ramganj. [↑](#footnote-ref-14)
15. Mukhiya is the elected leader/president and the Sarpanch is the judicial head of the Gram Panchayat. The ward members and Panchs report to the Mukhiya and Sarpanch respectively. [↑](#footnote-ref-15)
16. State Project Manager (SPM) and former BPM, Cycle 1. [↑](#footnote-ref-16)
17. CC, Cycle 5, Saifpur. [↑](#footnote-ref-17)
18. DTO and former AC, Cycle 2, Ramganj. [↑](#footnote-ref-18)
19. One should not confuse this strategy for ‘depoliticization’ in the Ferguson (1998) sense of the word. On the contrary, positioning oneself as apolitical *requires* thinking politically. It requires understanding local politics, and recognizing that a project of the magnitude of JEEViKA can generate political incentives, which need not be quashed or ignored, but need to be harnessed to keep the project alive. [↑](#footnote-ref-19)
20. AC, Cycle 3, Saifpur. [↑](#footnote-ref-20)
21. Former AC, Nauganj. [↑](#footnote-ref-21)
22. DTO, former AC, Saifpur. [↑](#footnote-ref-22)
23. Cycle 4, Ramganj. [↑](#footnote-ref-23)
24. Cycle 6 and 7, Several interviews and FGDs, Ramganj and Saifpur. [↑](#footnote-ref-24)
25. Village entry notes, Nauganj, Baseline. [↑](#footnote-ref-25)
26. Panchasutra literally means five principles, and JEEViKA’s panchasutra includes regular meetings, regular savings, regular inter-loaning, timely repayment and keeping the book of accounts up-to-date. [↑](#footnote-ref-26)
27. “Marching Forward.” [↑](#footnote-ref-27)
28. Butler (2015) refers to the relationship between forms of linguistic and bodily performativity. [↑](#footnote-ref-28)
29. Analysis of heterogeneous effects based on both baseline landholdings and caste was specified in the pre-analysis plan for this study. There is significant overlap between the landless and SC/ST populations in the sample, and impacts on SC/ST households are very similar to impacts on the landless. [↑](#footnote-ref-29)
30. See, for example, Banerjee et al. (2015) [↑](#footnote-ref-30)
31. Interest rates are generally non-compounding in this setting. [↑](#footnote-ref-31)
32. Appendix C [↑](#footnote-ref-32)
33. While Jeevika sought to encourage women to form and join SHGs, there were a small number of SHGs already present (~10% of HH had a member in an SHG) at baseline. However, none of these were Jeevika SHGs, which meant they could not access credit through the one-time grant that is part of the intervention. [↑](#footnote-ref-33)
34. The household average interest rate excludes any interest free loans. [↑](#footnote-ref-34)
35. Controls in this case are village-level means of the household-level baseline variables included in the models with household-level outcomes. For villages with no rate recorded at baseline, the mean rate at the panchayat (16 observations) or district (2 observations) level is used. [↑](#footnote-ref-35)
36. As described in the project report provided to BRLPS leadership and available online (see <http://brlp.in/documents/11369/125465/The+Impact+of+JEEViKA++Nov+6+2015.pdf/2a2cff78-280d-44c4-a1ab-a5a57262c42c?version=1.0>), women in treatment areas were significantly more likely to need to attend group meetings (by 48 pp) and banks (by 9 pp) than in control areas. However, mobility to other destinations, such as health center, friends or relatives’ houses, or the government shop for subsidized staple foods (PDS), was unaffected. [↑](#footnote-ref-36)
37. About $20,000. [↑](#footnote-ref-37)
38. For literature on the impact of microcredit programs and the SHG model on women’s empowerment see Sanyal 2009, 2014, 2015; Deininger and Liu 2013; Kandpal and Baylis 2013; Desai and Joshi 2014; Casini, Vandewalle, and Wahhaj 2015; Khanna, Kochar, and Palaniswamy 2015. [↑](#footnote-ref-38)
39. State Project Manager, Patna. [↑](#footnote-ref-39)
40. Nalanda AC. [↑](#footnote-ref-40)
41. District Training Officer (DTO), Cycle 2, Ramganj. [↑](#footnote-ref-41)
42. State Project Manager, Patna. [↑](#footnote-ref-42)
43. Nalanda CC. [↑](#footnote-ref-43)
44. DTO, Cycle 1, Saifpur. [↑](#footnote-ref-44)