

An impact assessment of stakeholder engagement interventions in Ugandan oil extractives

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Note to readers

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Executive summary

Many international organizations urge companies in the extractives sector to engage with local stakeholders, and issue “best practices” guidelines for doing so. Corporations in the business of natural resource extraction also believe that such engagement reduces their operational risks. These corporations have created standards for community engagement that they believe will help them obtain and maintain a social license to operate. However, reliable information about the impact of stakeholder engagement on participant communities is limited. In fact, we know of no rigorous experimental investigation—public or private—of the utility of such engagement for communities. Are governments and corporations more accountable when there is proper engagement with community-based stakeholders? And are communities likely to seek more accountability as a result of useful engagement with governments and corporations?

Business-Community Synergies (BCS) has worked collaboratively with Maendeleo ya Jamii (MYJ) for nearly ten years. The two organizations have used a methodology that emphasizes face-to-face interaction and inductive data gathering to build relationships of trust. MYJ further developed this methodology into a structured engagement process called Multi-Stakeholder Forums (MSFs). MSFs are designed to provide information, facilitate discussion, and address concerns among communities,¹ governments and corporate representatives in oil development areas of the Albertine Graben.

Our study evaluates the effectiveness of the MSF intervention to improve accountability to communities in Western Uganda. Our measured outcomes of interest are response to issues that households care most about (hereafter Issue Satisfaction), Land Management, Access to Social Services, Local Economic Development, and Attribution of blame/credit among decision-makers. Our purpose was to provide rigorous experimental evidence on the effectiveness of stakeholder engagement from the perspective of local communities impacted by extractives. The study design is a randomized controlled trial (RCT) where villages are randomly assigned to a treatment group (participating in MSFs) or a control group (not participating in MSFs).² We supplemented our quantitative measurement of outcomes with a limited qualitative component. The project involved baseline and end line data collection in 107 villages in the Albertine Graben.

We conducted the end line analysis just three months after the intervention.

Nevertheless, our analysis in this report finds the following immediate impacts:

- For those exposed to the MSFs, there is an overall increase in several measures of transparency, such as reported pursuit of independent information about oil development. However, MSFs did not increase actual knowledge of the oil and gas sector relative to the control group. (See Section 5.1 for more details)

¹ “Community” in this study refers to villages, the lowest level administrative unit in the country as identified in censuses carried out by the Uganda Bureau of Statistics.

² Villages in both treatment and control groups were also given general information about oil and gas development. We discuss the complete design and rationale in Section 3.1 and include a copy of this information packet in Appendix F.

- Civic actions³ increase significantly at the household and community levels as a result of MSFs. This includes greater participation in village meetings and oil sector meetings. Qualitatively, we found strategic changes such as increases in lobbying and protests (See Section 5.2)
- Our Index of Satisfaction shows that satisfaction increases in response to the treatment for issue areas that respondents care the most about. (See Section 5.3 for more information)
- We did not notice any treatment effects related to land management, such as increased rates of demarcation or registration of land. We also found that only around 37% of villages continued to consider land the highest priority issue at end line in both treatment groups, compared to approximately 50% in the baseline survey. The majority of treatment villages committed to actions related to social services and local economic development. Qualitative data indicated that respondents' land conflicts were resolved locally and amicably. (See Section 5.4)
- For the two other issues studied, social services and local economic development, our statistical analyses indicate no significant impact associated with the MSFs. Qualitative data indicated that respondents placed high importance on health centers, schools and jobs. We believe more time is required to determine whether MSFs have made a difference in these areas. (See Sections 5.5 and 5.6)
- Our study found that blame and credit were widely dispersed among village, sub-county, district leaders, as well as CSOs, oil companies and central government, and this was the case whether the respondent was male or female. Our qualitative data indicate that blame was primarily due to neglect and credit was primarily given for good leadership. (for more detail, see Section 5.7)

Discussion of data, the results and our interpretation of the results was conducted jointly with all three PIs and MYJ's core implementing team in Kampala. The report represents our shared views. In preparing this report we focused on the obvious and key findings of impact. There remain several unanswered questions that we plan to pursue as we put more time into studying the data in greater depth in the future.

³ These include: attended oil sector meetings; participated with CSOs; protested; voted; met with leaders at different levels of local government; called police; wrote a letter of petition; used the courts or mediation; lobbied for issues to be included in government plans.

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1. Introduction

This project assesses whether collaboration among stakeholders in the oil and gas sector will improve development outcomes for local communities. Policy decisions in the extractives sector affect a wide variety of actors, such as private companies, different levels of government, and communities near a venture's area of operations. Decision-making in this sector often fails to adequately involve local communities beyond one-time public meetings (IFC, 2007), while prioritizing private and government interests. To assess the efficacy of one approach to expanding stakeholder engagement and collaboration, we report an impact assessment of the activities of a Ugandan civil society organization, Maendeleo ya Jamii (MYJ).

Companies in the extractives sector often attempt to gain a social license to operate, because conflict with local communities may decrease the value of specific ventures and even overall corporate value (Franks et al., 2014). In a publication in *PNAS*, Franks et al. (2014) report that most companies believe that stakeholder engagement strategies can help them avoid conflict with local communities. Evidence we present speaks directly to whether stakeholder engagement improves business-community relations, mitigates the problems faced by local communities, and reduces conflict.

More broadly, the global policy community is grappling with problems of ensuring transparency and accountability in the extractives industry. Transparency and accountability surrounding extractives is especially difficult to maintain in environments where formal institutions are not able to stave off rent-seeking and corruption (Kolstad and Søreide, 2009; Kolstad and Wiig, 2009; Arezki and Bruckner, 2011). International initiatives like the EITI (Extractive Industries Transparency Initiative) have been attempting to confront this challenge, and our study suggests that there is a larger role that civil society-led initiatives could play in the future.

MYJ has been conducting stakeholder engagement forums (MSFs) in the extractives industry for many years. People living in affected communities often express satisfaction with the forums, and based on their experience MYJ believes the forums truly benefit the residents of the Albertine Graben. In 2015, MYJ became interested in more systematic evidence on the effectiveness of these forums.

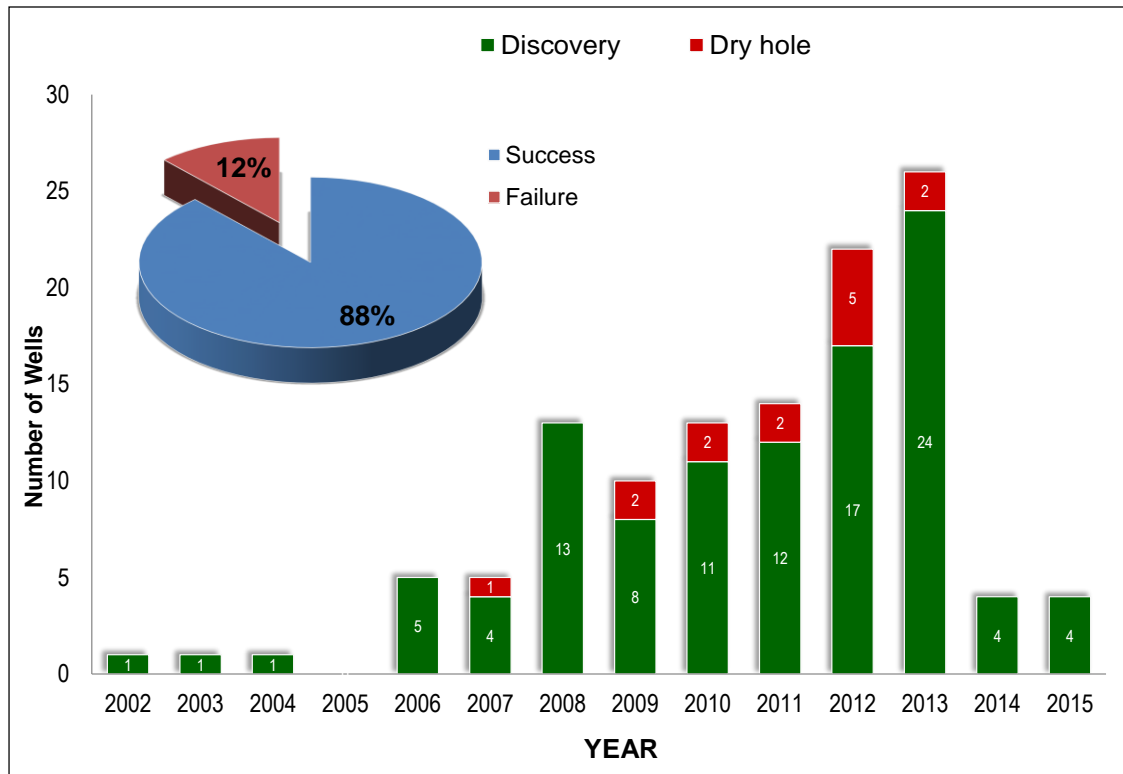
1.1 Oil and Gas in Uganda

The Albertine Graben covers approximately 25% (68,000 km²) of Uganda's land. It is inhabited by 25% of Uganda's population and the southern portion is one of the most densely populated rural areas on the African continent. It hosts at least 14 major ethnic groups with varied cultural and economic systems, the majority of which are agricultural and produce 30% of Uganda's food crops. It is the most species-rich eco-region for vertebrates in Africa and accounts for over 70% of Uganda's tourism revenue.

Petroleum exploration has taken place intermittently in the Albertine Graben for almost 100 years. Since 2002, 121 wells (39 exploration wells and 82 appraisal wells) have been drilled in the Albertine Graben. Of these, 106 wells have revealed 21 oil and gas discoveries, representing a drilling success rate of over 88% (0). Commercial quantities

of oil were discovered in 2006 and preparations for the development of these discoveries are currently underway as exploration continues.

Figure 1: Current Status of Exploration and Appraisal Drilling in the Albertine Graben (Source: MEMD, 2016)



The Ministry of Energy and Mineral Development (MEMD, 2016; MEMD, 2017) explains the major developments in Uganda’s policy, legal, and institutional framework in the petroleum sector over the last 10 years. A new policy was developed in 2008 to guide the sector and this has been followed by new legislation and the creation and involvement of new institutions in the sector (0). The National Oil and Gas Policy identifies key challenges in the sector and offers seven guiding principles, as well as 10 key objectives with strategies and actions to meet them. It offers guidance on the roles and responsibilities of key stakeholders such as government ministries, departments and agencies, civil society and the private sector. A popular version of the policy has been developed and translated to eleven languages and progress of its implementation is documented and published annually.

The legal framework covers the upstream, midstream and downstream areas of the petroleum value chain. The institutional structure is organized to address policy and licensing (Directorate of Petroleum), commercial and business interests (National Oil Company), monitoring and regulation (Petroleum Authority), environment (National Environment Management Authority), biodiversity (Uganda Wildlife Authority), physical planning (Ministry of Land, Housing & Urban Development), and revenue (Uganda Revenue Authority and Bank of Uganda), amongst other issues.

Table 1: Uganda’s Petroleum Sector Policy, Legal and Institutional Framework (Source: MEMD, 2017)

<i>Policy</i>	<i>Legislation</i>	<i>Institutions</i>
The National Oil and Gas Policy (2008)	<ul style="list-style-type: none"> • The Petroleum (Exploration, Development and Production) Act, 2013 • Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013 • Petroleum Supply Act, 2003 • Public Finance Management Act, 2015 • The Petroleum (EDP) Regulations, 2015 • The Petroleum (EDP)(Health, Safety & Environment)Regulations, 2016 • The Petroleum (EDP) (National Content) Regulations, 2016 • The Petroleum (EDP) (Metering) Regulations, 2016 • The Petroleum (RCTMS) Regulations, 2016. • The Petroleum (RCTMS) (National Content) Regulations, 2016 • The Petroleum (RCTMS)(Health, Safety & Environment) Regulations, 2016 • The Petroleum Supply (General) Regulations, 2009 • Petroleum (Marking and Quality Control) Regulations, 2009 • Model Production Sharing Agreement and Joint Operation Agreement 	<ul style="list-style-type: none"> • Directorate of Petroleum • National Oil Company • Petroleum Authority • Supporting ministries, departments and agencies, such as the: <ul style="list-style-type: none"> → Ministry of Water & Environment → Ministry of Finance, Planning & Economic Development → Ministry of Tourism, Wildlife & Antiquities → Ministry of Lands, Housing & Urban Development → National Environment Management Authority → Uganda Wildlife Authority → Uganda Revenue Authority → National Planning Authority → Auditor General → District & Sub-County Local governments

In spite of these efforts, earlier research by MYJ revealed 15 major categories of barriers associated with the petroleum sector in Uganda (Manyindo et al., 2014). The 15 categories of barriers include: community support, corporate social responsibility, corruption, displacement and compensation, education and training, employment, environment, information and communication, infrastructure, local economic development, policy and legal frameworks, public health, social, security, and stakeholder engagement (0).

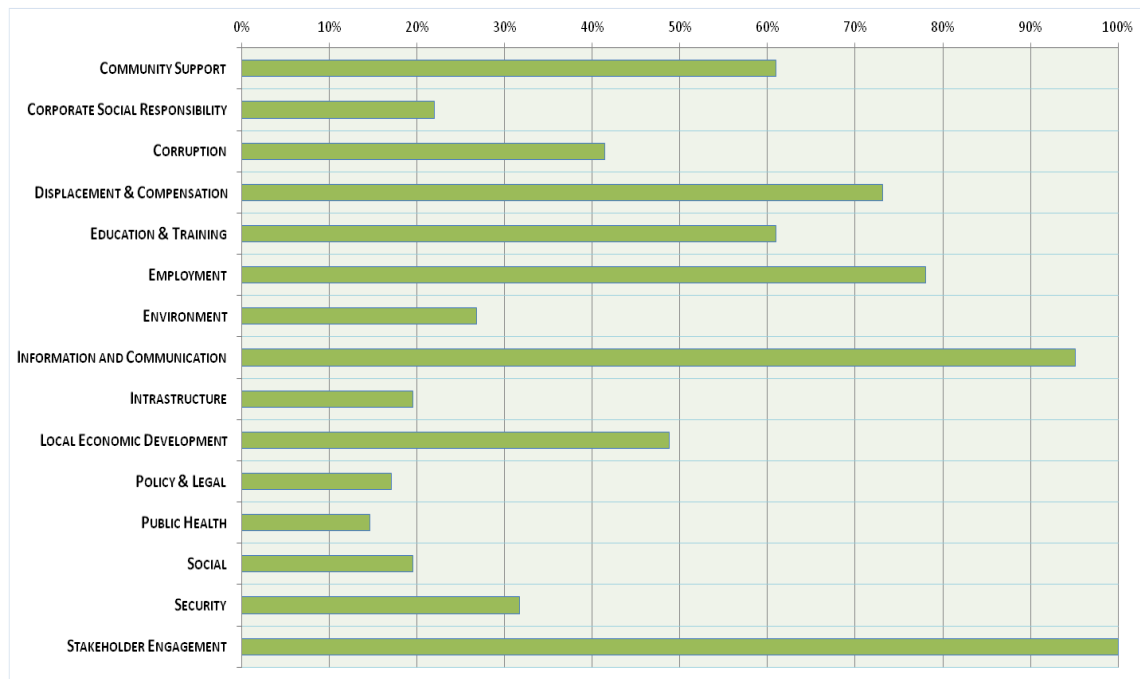
Table 2: Categories of barriers in Uganda’s petroleum sector and their definitions

Categories of Barriers	Definitions
Community Support	Barriers related to community and local government limitations and their unmet desires and expectations
CSR	Limitations related to the design and impact of corporate social responsibility
Corruption	Barriers concerning favouritism, nepotism, exploitation, bribery, and fraud
Displacement & Compensation	Actual and potential loss of property, rights, income, and/or access that have a direct impact on livelihoods
Education & Training	Barriers related to literacy, limited education, training, and teacher welfare
Employment	Barriers related to job opportunities and employment practices (recruitment, terms, rights, affirmative action)
Environment	Barriers related to the management of waste, environmental degradation, noise and air pollution, perceived ecological instability, and environmental compliance monitoring
Information & Communication	Barriers related to information sharing in terms of access (supply and demand), regularity, transparency, reliability, timeliness, frequency, relevance, truthfulness, accuracy, and clarity among all stakeholders
Infrastructure	Barriers related to inadequate roads, their maintenance, and access to electricity
Local Economic Development	Barriers related to real and potential loss of economic opportunities, increased cost of living, reduced production, delayed income, exclusive tendering practices, and limited community preparedness to take advantage of economic opportunities
Policy & Legal Frameworks	Barriers related to an inadequate and unfair policy and legal framework and its unsatisfactory implementation
Public Health	Barriers related to access to adequate healthcare, clean water, medical staff, and disease control
Social	Barriers related to local behavioural, cultural and moral standards
Security	Barriers related to human-wildlife conflict, inter/intra-community conflict, community safety, and theft of property
Stakeholder Engagement	Barriers related to deficient inter/intra stakeholder interaction, flow of information, participation, benefit, trust, and a sense of helplessness by communities and local government; unfriendly, disrespectful, fearful and hostile relations, and unfulfilled commitments by companies

The Manyindo et al. (2014) study was gathered from focus group discussions with participants from 29 villages, local governments in 7 districts and 2 companies in the Albertine Graben. When the authors asked these various stakeholders what barriers they were experiencing in Uganda’s petroleum sector, their responses created 15 categories (0). Stakeholder engagement is the only category in which all respondents expressed concerns (0). Information and communication closely followed with 96% of all

respondents expressing concerns in this category. These earlier findings motivate the current research.

Figure 2: Analysis of 15 major categories of barriers in Uganda’s petroleum sector



At the beginning of this study Uganda was anticipating major expansion of oil and gas activity throughout the region. However, the price of oil fell by more than 50 percent and negotiations between government and the oil companies on production licenses were protracted; this slowed the development of oil and gas in the region. However, production licenses have been issued, the construction phase (e.g. central processing facilities, pipelines and a refinery) is about to begin, and people in the region are still anticipating development.

1.2 Purpose of this study

As noted above, stakeholder engagement was identified by people in the Albertine Graben as their single largest concern (cited by 100% respondents), along with information and communication. Thus, the need for better understanding about how to facilitate engagement and to make information available in an easy and accessible format are real and current challenges for the Albertine Graben.

A growing academic literature explores the benefits stakeholder engagement may provide to communities, companies, and governments. Such work is necessarily diverse, drawing together scholars who study the private sector (economics and business management), the public sector (political science and public administration) and civil society (public management). Work by political scientists focuses on institutional characteristics (Balla and Gormley, 2017) or the complex networks of actors who participate in these decisions (Lubell 2004a, 2004b; Mewhirter, Berardo, and Coleman Forthcoming).

The work from business management treats collaborative governance as a form of corporate social responsibility (Jamali and Karam, 2016). These scholars treat collaborative governance as a business investment, which is then evaluated in terms of the effects on profit (Henisz, Dorobantu, and Narty, 2014). For example, using observational data on investments in stakeholder engagement, Henisz, Dorobantu, and Narty (2014) find that such investments substantially improve the profitability of gold mine ventures.

Despite the growing interest in stakeholder engagement, the empirical evidence for these studies tends to be weak. This is largely driven by research designs that cannot adequately identify causal effects. Many studies are anecdotal, examining one or very few cases (Donahue, 2004). Even if there are explicit comparisons among multiple cases— which allows for more reliable inferences— these studies are still likely to suffer from selection bias (Ansell and Gash, 2008). If stakeholder engagement has only been tried in “easy” cases then the purported effects may be overstated; on the other hand, if stakeholder engagement only happens in areas where problems are very severe, then its true effects may be understated.

Based on the limitations of current research, our study is worthwhile for several reasons. First, we conduct a randomized control trial (RCT) among a population whose lives have been significantly impacted by nascent oil development, and whose lives will be altered even further as production begins in earnest. Thus, our study region of the Albertine Graben is not an “easy” case. Second, the districts in our study region face varied stages of the oil development process. Thus, finding robust average treatment effects across our entire sample indicates that MSFs are effective in a variety of circumstances. Third, as with all RCTs, through careful selection of treatment and control villages we can be highly confident that any differences in various outcome measures are caused by the treatment itself (in our case, the value-added of holding MSFs rather than simply sharing information packets).

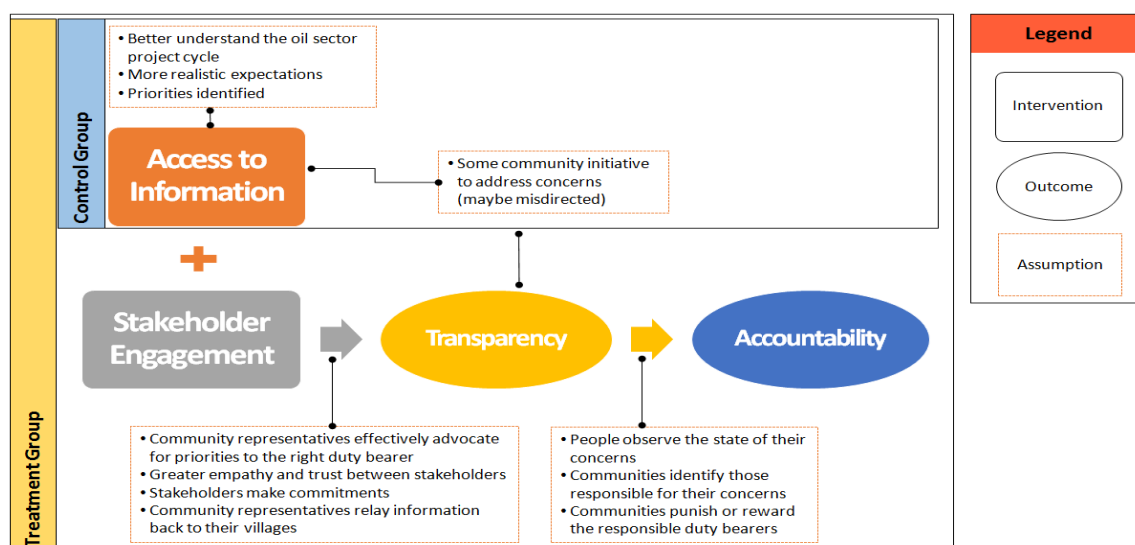
Finally, we added a qualitative component to some sections to gain a deeper understanding of how people think about these topics. The qualitative responses also supplement summaries of large amounts of quantitative data with rich descriptive details that provide the respondent’s viewpoint and place quantitative results into their social and cultural context.

2. Theory of Change

The intervention occurs in the form of access to information (both treatment and control group) and participation in multi-stakeholder forums (treatment group only). The control communities represent a transparency-only group, while the treatment communities represent a transparency + engagement group. Thus, the design is meant to assess the value-added of MSFs above transparency.

Error! Reference source not found. below shows a graphical depiction of the theory of change.

Figure 3: Theory of Change



On the far left of the figure are the two components on the interventions: access to information and stakeholder engagement. Note that the control group (box with blue heading) receives only access to information, while the treatment group receives both access to information as well as participation with stakeholder engagement. The proximate outcome of interest is increased transparency (yellow circle) and the more distal outcome of interest is accountability (blue circle). The theory of change illustrates the causal pathways as well as highlights the assumptions needed for these pathways to hold. We discuss each below.

2.1 Access to Information

Communities often have intermittent access to (sometimes inaccurate) information about oil and gas development apart from the work done by MYJ. We therefore did not feel it was possible to have a pure control group with no access to information. Instead, we opted to ensure that each and every community would at least have access to accurate information about the sector. MYJ delivered standardized information packets (we include the materials in the information packet in Appendix F) to both treatment and control villages. Improved access to information alone could catalyse some communities to begin demanding more accountability.

We assumed that the information package would inform people and they would better understand the oil sector in the region. But community actions are often directed to the wrong decision-maker. Therefore, access to information may lead to some measure of increased transparency and accountability in control villages. However, we expect the largest impacts in treatment villages that can identify and have access to the appropriate decision-makers for their specific concerns.

2.2 Stakeholder Engagement Increases Transparency

In addition to the information provided to all villages, the intervention for the treatment group directly facilitates stakeholder engagement. For transparency to follow, the appropriate decision-makers must be identified and they must consider and respond to community priorities.

First, each village identifies three community representatives to the multi-stakeholder meeting to increase the probability that community interests are voiced and addressed. The elected LC1 has an electoral mandate to represent these interests. Each village selects an additional two representatives from the village because strong empirical evidence in Uganda suggests that elected officials are responsive to monitoring by others (Carslon, 2015). At least one of the two representatives is female to ensure that gender-based concerns are addressed. Furthermore, a unified voice from both elected and non-elected community members increases the power of the delegation in the meetings.

Second, stakeholder engagement leads to increased empathy and trust. The process of creating empathy is facilitated through the face-to-face interaction during the multi-stakeholder meetings (Ostrom, Walker, and Gardner, 1994). Theories of conditional cooperation posit that most people will cooperate with others if they trust that others will reciprocate (Frey and Meier, 2004). The assumption here is that treatment villages will establish greater empathy and trust than control villages.

Third, we assume that decision-makers are more likely to make commitments and coordinate their plans with villages represented in the multi-stakeholder meetings. For example, companies may share a more detailed schedule of their planned activities, or seek out more consultation if communities raise an unexpected issue. We do not necessarily assume that decision-makers will make grand concessions during these fora; only that they are more likely to make commitments and implement them based on interactions with communities that do participate than with those that do not.

Fourth, following the MSFs, we assume that the community representatives will spread the information they have learned to others in their home village. They will inform others of the commitments made by decision-makers and their communities, and relate information about the perceived empathy and trustworthiness of others.

Fifth, we expect community representatives to the MSFs to lead the implementation of commitments they have made and to follow up on commitments made by decision-makers in the MSFs. Part of MYJ's intervention is to facilitate communities to develop action plans to keep decision-makers accountable.

2.3 Transparency Increases Accountability

Improved accountability follows when decision-makers and community representatives account to each other for the commitments they have made and the actions they have taken. We here outline the rationale that leads us to believe that the intervention can improve accountability through increased transparency.

2.3.1 Civic Action

The treatment improves the capacity of the household and communities to act collectively and undertake civic activity in order to influence decisions or to seek remediation. Stakeholder engagement helps communities identify the actors responsible for the various aspects surrounding petroleum and then learn from other communities' attempts to influence this process. For example, MYJ-facilitated MSFs have previously empowered communities to write letters of petition to government officials about a problem they were experiencing. These actions resulted in government officials

addressing the problems that communities presented. Other communities have met personally with government officials or with oil company community liaison officers. MYJ believes that past stakeholder engagement activities have increased community awareness of the potential for policy influence and remediation as well as clarify the appropriate civic actions to take for specific concerns. Community actions can begin immediately after the intervention.

2.3.2 Decision-maker performance

Conceptually, we think about accountability in terms of the performance of decision-makers; if decision-makers provide the services demanded by communities then they are therefore accountable. Decision-makers must both understand the preferences of the communities and then direct policy choice to address those preferences. Stakeholder engagement clarifies the roles, responsibilities, and duties of different decision-makers. If communities clarify the actors to whom they must relay their preferences and then act collectively to express those preferences, the decision-makers are more likely to respond.

However, in this setting preferences over service prioritization varies both between households and between communities. This poses a difficult problem in research design—it is not possible, conceptually, to assess the provision of goods and services uniformly across the study population. Some communities may prioritize land management decisions while others are concerned with social service provision. It is not the absolute improvement in these issues that is important; rather, accountability demands that decision-makers address those issues of importance to the relevant communities.

Our pilot work identified three main issue areas of concern to people in the region: land management, social services, and local economic development. Different decision-makers in the region have authority to provide services in each dimension; however, the community must be aware of which decision-maker is responsible for what area, and the official in that area then must direct resources to addressing those concerns. The MSFs help direct communities to the appropriate decision-maker and make enable communities to form action plans to hold those decision-makers accountable for their subsequent actions.

Perceptions about the performance of each of these sectors can be changed relatively quickly. Communities interact with decision-makers who either commit or fail to commit to direct resources to address their concerns. Communities can then see whether those decision-makers are starting the process of directing resources towards those priority areas. However, it may take much longer to see *actual changes in service delivery*—schools and hospitals take time to build and land management conflicts take time to resolve. Thus, we expect stronger immediate effects on perceptions about performance, but anticipate actual service delivery to take more time.

2.3.3 Attribution of Responsibility

A necessary condition for accountability is that citizens attribute blame or credit to the actors responsible for the state of their concerns (Manin, Przeworski, and Stokes, 1999; Gomez and Wilson, 2006). For complex policy problems such attributions are difficult to make. The process of stakeholder engagement simplifies this process: if stakeholders

make commitments to perform certain actions, then others can observe whether they executed those actions and seek remediation from the appropriate actor if those actions are not followed. With greater clarity of responsibility, communities are more willing and able to hold the appropriate decision-makers accountable for their performance. Communities are also willing to undertake actions that complement decision-maker commitments in order to address concerns in a comprehensive manner. If decision-makers anticipate that people can more clearly identify poor performance, then they have greater incentive to improve.

Attributed responsibility of blame and credit among the various decision-makers is also a long-term outcome. Communities must see the responses of decision-makers and then use that information to change their opinions about the performance of decision-makers.

3. Research design

3.1 Description of the Intervention

The research team considered the fact that there is already considerable dissemination of information by various players within and outside the project area. Therefore, as part of the intervention, we ensured that both treatment and control villages had access to the same publicly available information. Only the treatment villages were allowed to participate in the MSFs. The intervention⁴ was carried out as follows:

- 1) In both control and treatment villages (107 project villages total), MYJ staff delivered 2 hard copies of an information package during meetings convened by each Village Chairperson.⁵ This information package is a compilation of questions and answers based on community and local government concerns about Uganda's oil and gas activities in the Albertine Graben. These concerns were captured both by CSO and central government agencies during various interactions with communities and local governments over time. The Village Chairperson was the custodian of the information packages. (The information packet is included in Appendix F).

At those same meetings, residents of the 52 treatment villages each selected 3 representatives to participate in one MSF. These representatives comprised of the LC1 Chairperson, and two others chosen by the community (one had to be female). Selections were based on three criteria: ability to communicate in English; confidence that they will effectively represent their respective villages and present concerns to the forum; and trust that they will provide feedback to the village after the engagement.

- 2) The treatment villages each experienced MYJ-facilitated stakeholder engagement for the first time. Three different MSFs were planned for the treatment; each having no more than 60 participants. The treatment villages were clustered by district with Buliisa, Hoima, and Ntoroko as one group; Arua, Moyo, Nebbi, and Nwoya as a second group, and the third was Yumbe. This rigorous two-day engagement process involved:

⁴ The intervention was funded by the DFG (Deutsche Forschungsgemeinschaft, German Research Foundation).

⁵ Each village was responsible for holding a meeting and disseminating this information.

Day 1:

- a. Interacting with community representatives from other oil-bearing districts to share their experiences.
- b. Interacting with the Association of Uganda Oil and Gas Service Providers and learning about private sector experiences in Uganda's petroleum sector.
- c. Interacting with the Ministry of Energy & Mineral Development to learn about the status of Uganda's petroleum sector; and the Ministry of Lands, Housing & Urban Development to present the Albertine Graben Physical Plan.

Day 2: Developing village action plans based on the priority concerns of their respective communities, identifying what roles each community representative should play in executing these plans, and agreeing on a reasonable timeframe by which each of the actions they have committed to will be completed.

At the end of the two-day MSF, each team of village representatives left with a folder that contained a copy of all the information presented to the forum, the information generated by the participants during group sessions (i.e. their respective village action plans), and the names and contact of the various government and private sector presenters. The representatives were encouraged to share the information they had learnt with their village members and to fulfil the commitments they made in their action plans.

We would like to explicitly note here, that standardizing the intervention for the sake of the impact evaluation necessitated some simplifications from the typical MSF held by MYJ. For this intervention MYJ fast-tracked its typical MSF process to accommodate the project timeframe. For instance, the various capacity building interactions that are designed to prepare communities to effectively engage with other stakeholders prior to the MSFs, had to be incorporated into the first day of the treatment.

3.2 Identification Strategy

The research design is a pre- post- design with village-clustered random assignment to treatment and control group. Estimation of treatment effects through the Difference-in-Differences estimator (DID) is described in section 5. Treatment assignment was randomized at the village level, and blocked on district. Approximately half of the communities within each district were in the treatment (52 communities total) and control (55 communities total) groups.

MYJ identified 107 new villages in the area in which they would begin operations.⁶ The intervention (described above) in these new villages took place between the baseline and end line data collection in the summer of 2017.

Below, we discuss survey design, and then our sampling strategy at the village and household level in more detail.

3.3 Data collection

The baseline and end line surveys were designed to capture the different elements of our theory of change outlined above as clearly and distinctly as possible. For the

⁶ The study actually started with identifying 109 villages. However, one village refused to participate at baseline and a second village refused to participate at the end line.

quantitative portion, it was important that questions be worded to limit varied interpretation by different respondents and for comparability across languages. This portion constituted the majority of our survey. This data was recorded through a smartphone survey application that was then uploaded to a secure server at the end of each day. We also added qualitative questions in key areas to better understand the reasons for their responses. All enumerators received training on both the qualitative and quantitative parts of the survey.

Qualitative data was limited to the primary focus of the survey - the importance and satisfaction of the three issues (land, social services and local economic development), as well as attributions of blame and credit to various decision makers in the oil development process. Particular attention was given to the issues or entities that a respondent ranked the highest. A qualitative coding structure for each of the 4 questions was created (Appendix A), and this coding structure was included in a data collection tool that the enumerators were required to use in the field.

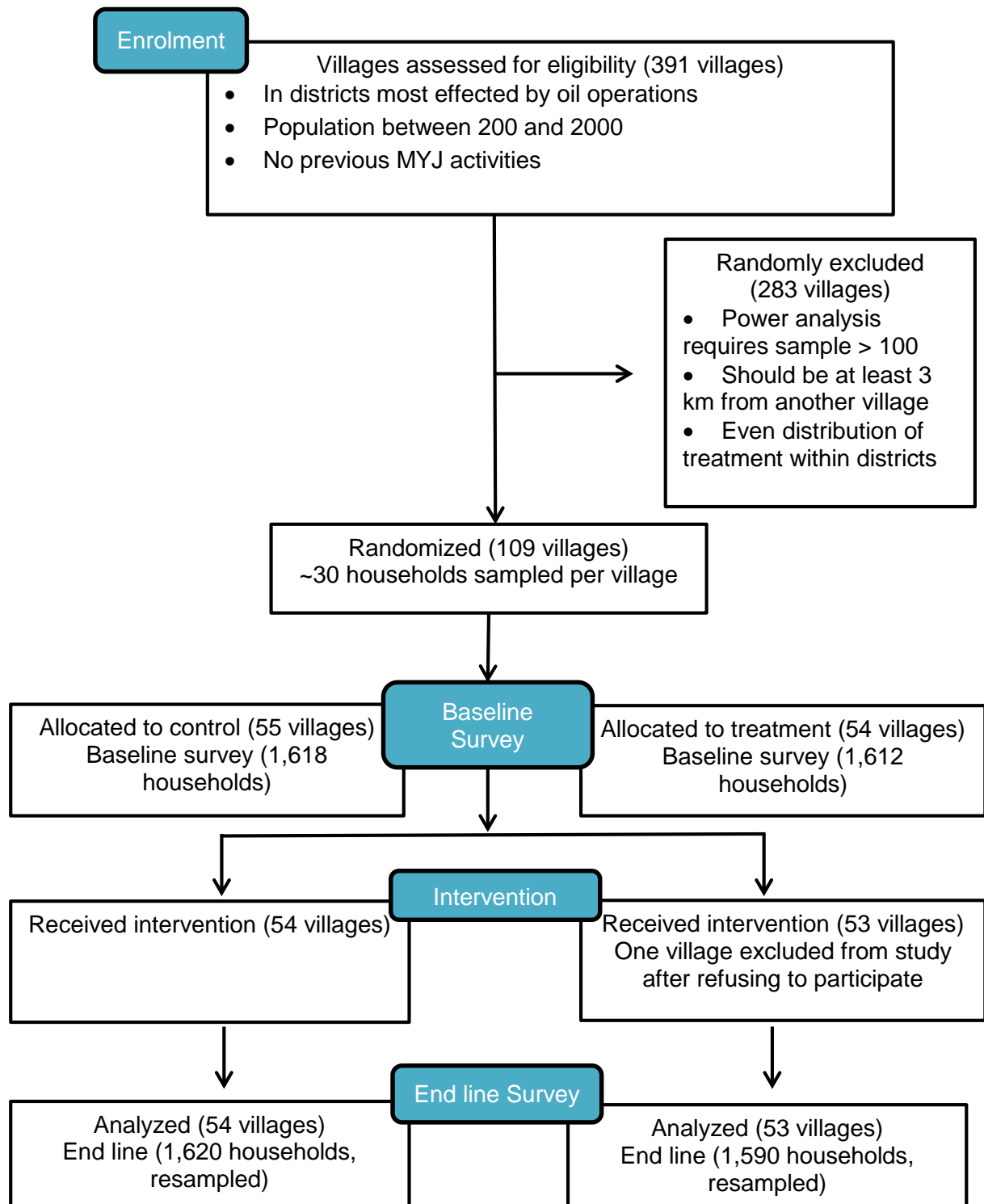
The qualitative responses to issue importance, issue satisfaction, blame, and credit were captured on the qualitative data collection tool and coded by the enumerator. At the end of each day, field supervisors convened their team of enumerators and validated all the coded responses for that day as a team. The data was then scanned and forwarded via email or WhatsApp to the data entry supervisor based in Kampala who acknowledged receipt and assigned the data to a team of specialists that typed the data into a MS Excel spreadsheet.⁷ Thereafter, the data was cleaned for errors and submitted for analysis. The coded responses were aggregated and analysed for explanation of the quantitative findings. The overall sampling design is reported in the CONSORT flowchart below reported in Section 3.3.1, which shows the broad issues related to sampling. The sampling design has four distinct stages: (1) During the enrolment phase we identified a list of all eligible villages in the region of the study. (2) At baseline we conducted household surveys with 30 households per village and assessed balance statistics across treatment and control groups. (3) During the intervention phase we delivered information packets to all villages and held MSFs treatment villages. (4) At end line we resampled 30 households per village. We discuss major issues by category below.

3.3.1 Village Sampling

The sampling strategy for the study started by identifying the districts most affected by oil operations in western Uganda: Hoima, Buliisa, Moyo, Yumbe, Arua, Nebbi, Nwoya and Ntoroko. Next, we limited the study to communities with populations between 200 and 2,000 according to the most recent census. We did so to ensure that we could obtain adequate community coverage within the household survey. We then eliminated all communities wherein MYJ had previously worked. Based on this sampling frame, we identified 391 potential communities for inclusion into the study.

⁷ MYJ and BCS jointly agreed that Excel was a better choice than other qualitative data software such as NVivo because Excel is accessible to more people, making the data more accessible. Additionally, the critical and time-consuming component is the coding process, and regardless of the software, that must be done manually to ensure proper representation of the meaning of what was said by the respondent.

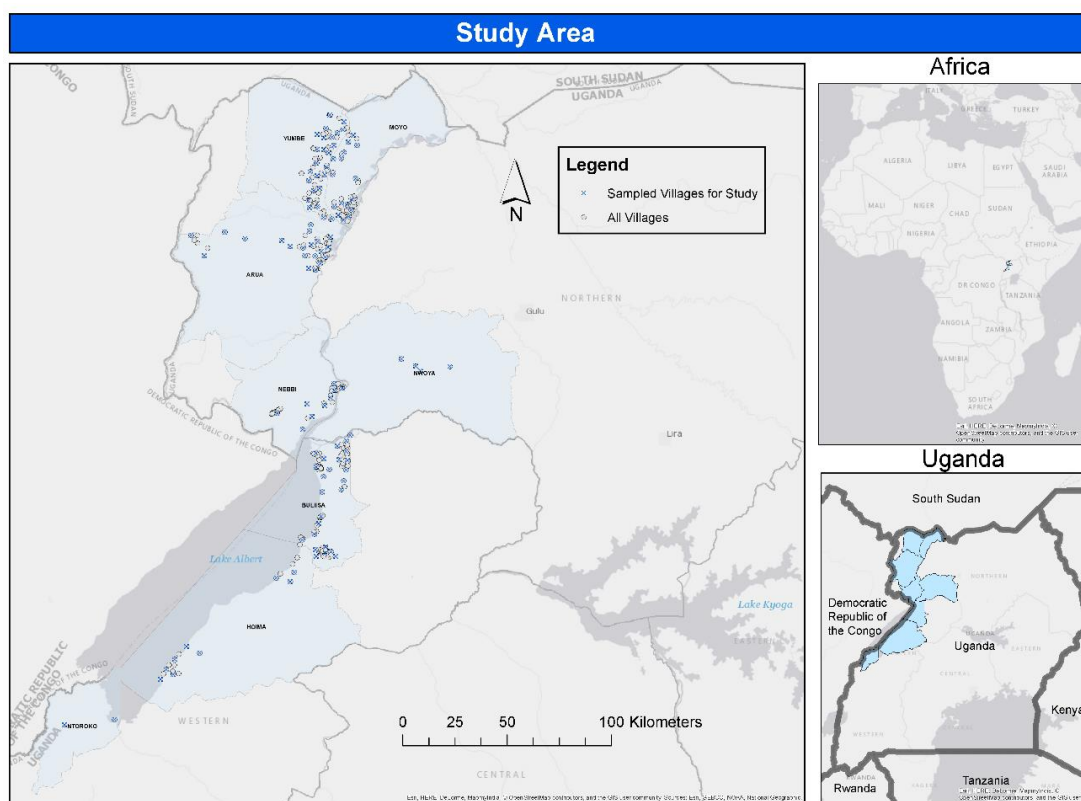
Figure 4: CONSORT flowchart for the sampling design and allocation to treatment



Our baseline power analysis suggested that we needed over one hundred communities for the study. Many of the 391 potential communities identified for the sampling frame lie geographically close to one another. Thus, we opted against pure random sampling and instead sampled 107 communities within these districts under the constraint that all sampled communities be at least 3 kilometers away from any other sampled community.

Error! Reference source not found. shows all the communities identified by the population constraint (hollow circles) as well as the final communities that were randomly selected under the distance constraint (crosses).⁸ A high resolution image of this map is available in Appendix G. Each sampled community is at least 3 kilometres away from other sampled communities.

Figure 5: Map of sampled communities.



Random sampling under the constraints outlined above ensures that those communities selected into the study are not systematically different from other communities. While the sampled communities may be more isolated than a typical community, we do not believe this poses a serious threat to external validity, especially considering the important advantage of mitigating spillover effects (we discuss efforts to account for spillovers as a robustness check in Section 6). It is true that the intervention could be more effective among communities that are densely clustered near each other. However, our implementing partner MYJ works in more isolated communities, so capturing spillover effects in our analysis does not provide a helpful lesson for them on the effectiveness of MSFs. More generally, we feel it is important to establish a precise estimate of the treatment effect on individual villages that is not confounded by interference between study units, before exploring the utilitarian benefits of spillovers in future research.

Strictly speaking, then, external validity is limited to isolated villages within the region. Anecdotally, however, we do not believe that the communities we selected for the study

⁸ As shown in our robustness section, it simply was not possible to entirely avoid choosing villages within 3km of each other. However, the number of villages this close to each other in our sample is small.

to be atypical of other communities throughout the region.

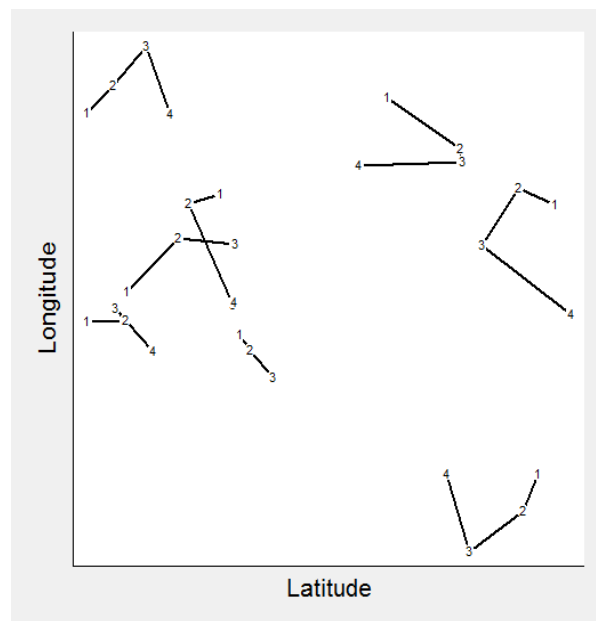
3.3.2 Household Sampling

We used a quasi-random sampling technique (random walk) to survey approximately 30 households per community. We used a quasi-random technique because no village lists exist from which we might randomly sample. To give a reader an idea of the quasi-random nature whereby we selected households, Figure 3.3 shows the geographic path for each of 8 enumerators in a random village that was conducted in the baseline. This path was taken by the GPS locations where the enumerator filled in each survey within a village. The figure shows the order of each household each enumerator interviewed. shows a histogram of the number of household surveys we conducted across communities. We conducted 30 household surveys in most communities. In sum, the survey team conducted 6,440 total (baseline/end line, treatment/control) household surveys, across 107 communities.

At both end line and baseline we chose 30 household surveys per village in order to ensure that we had adequate coverage of the community. We emphasize that the sample is not a panel of respondents, but rather separate random samples at end line and baseline. In addition, enumerator training emphasized an equal number of male and female respondents. The enumerator asked for to speak to an adult household member knowledgeable about the household. In practice, the survey often drew interest from many people in the household. This was assessed on a daily basis using the Enumerator Activity Log. The final baseline data was comprised of 48.8 percent men and 51.2 percent women.

The procedures to ensure a quasi-random sample of households within each community, the large quasi-random household sample sizes, and strong gender balance provide assurance that the information we obtained from the household sample is broadly representative of people within the region. We give details on the household survey in Appendix E.

Figure 6: Quasi-Random Household Survey in a Village from the Baseline Data



3.4 Covariate Balance

We reported extensive tests on pre-treatment covariate balance across a variety of continuous and binary variables in the baseline report. Instead of repeating that information here, we refer the reader to figures from the baseline survey, attached as Appendix B.

3.5 Hypotheses

We now formally present our hypotheses and measures of the outcome variables. We summarize the hypotheses and their operationalization in 0. We divide this into 4 type of hypotheses reflective of the Theory of Change: Transparency, Civic Actions, Overall Satisfaction, specific question about Issue Areas, and Attribution of Responsibility. The table also reports an intuitive description of the measured outcome and more specific summaries of each measure.

Table 3: Hypotheses and Operationalization

<i>Hypotheses</i>	<i>Outcome</i>	<i>Measure</i>
Transparency		
1.) Stakeholder engagement increases political knowledge	Respondent knowledge of oil sector	% of 9 true/false questions about local oil development answered correctly
2.) Stakeholder engagement encourages respondents to pursue more information	Respondent's pursuit of information about oil development	Y/N question: has respondent tried to get more information from sources they know of?
3.) Stakeholder engagement increases awareness of local issues	Self-reported degree of awareness of oil sector activities	Scale question: do respondents feel very, somewhat, or not at all aware of oil sector activities?
4.) Stakeholder engagement makes communities more confident in their ability to obtain information	Self-reported degree of confidence in one's ability to obtain information	Scale question: do respondents feel very, somewhat, or not at all confident?
5.) Stakeholder engagement helps respondents trust decision-makers to share important information	Do respondents feel that oil sector decision-makers share important information?	Scale question: do decision-makers share information with communities always, sometimes, or never?
6.) Stakeholder engagement makes respondents perceive decision-makers as more transparent	Self-reported perception of transparency of oil sector decision-makers	Scale question: do respondents feel these figures are very, somewhat, or not at all transparent?

<i>Hypotheses</i>	<i>Outcome</i>	<i>Measure</i>
Civic Actions		
1.) Stakeholder engagement encourages civic participation	Reported household participation in civic activities related to oil development	Y/N question: has anyone in your household taken action to address their concerns about the oil sector? ⁹
	Reported community participation in civic activities related to oil development	Y/N question: has anyone in your community taken action to address their concerns about the oil sector?
Satisfaction		
1.) Stakeholder engagement increases satisfaction with the handling of issues one deems important	Net satisfaction with three issue areas, weighted by how important a respondent perceived it to be (land management, social service provision, local economic development)	Satisfaction with these issue areas and perceived importance are based on respondents' allocation of stickers; see section 5.1.3.
Issue Areas		
1.) Stakeholder engagement improves land management	Land ownership	Y/N question: does your household own this land?
	Land demarcation	Y/N question: Is this land demarcated?
	Land registration	Y/N question: Is this land registered/in the process of registration
	Outside claims	Y/N question: has someone outside your household tried to make a claim on this land?
2.) Stakeholder engagement improves access to social services	Secondary school access	Y/N question: does your household have access to a secondary school?
	Health center access	Y/N question: does your household have access to a health center?

⁹ Respondents were also able to specify what specific actions were engaged in, out of: attending oil sector meetings; voting; participating with CSOs; meeting with village leaders; meeting with sub-county leaders; meeting with district leaders; calling police; writing a petition; using courts or mediation; and lobbying. This is true for the question on community-level civic activity as well.

<i>Hypotheses</i>	<i>Outcome</i>	<i>Measure</i>
	Safe water access	Y/N question: does your household have access to safe water?
	Roads and bridges access	Y/N question: does your household have access to roads and bridges
	Electricity access	Y/N question: does your household have access to electricity
3.) Stakeholder engagement improves local economic outcomes	Business association membership	Y/N question: is anyone in your household a membership of a business association?
	Participation in skills training	Y/N question: has anyone in your household participated in a skills training program?
	Oil sector employment	Y/N question: has anyone in your household been directly/indirectly employed in the oil sector?
	Market access	Y/N question: do you have access to markets?
Blame/credit attribution		
1.) Stakeholder engagement should increase the concentration of blame and credit for policy outcomes on the actors who are actually responsible	Relative concentration of blame and credit for oil-sector outcomes across different possible figures ¹⁰	Blame and credit scores are based on allocations of stickers across seven different key figures; see Section 5.1.7

¹⁰ Community members themselves; village leaders; sub-county leaders; district leaders; oil companies; central government; and civil society organizations.

4. Descriptive Information on Respondents

In Appendix D we provide descriptive figures that show change in many of our outcome measures. We direct readers interested in a descriptive overview of our results there. Here, we provide some background information garnered from the baseline and end line surveys, before discussing our estimation strategy and observed treatment effects in the next section.

0 shows the number of end line respondents in different districts. By virtue of how villages were chosen, some districts (Yumbe, Arua and Buliisa) are more represented than others. The pattern in the baseline survey is the same, so that figure is omitted. Additionally, it is clear from this figure that the number of treatment and control respondents is virtually the same within each district. 0 shows the gender balance among respondents in different districts. The emphasis in enumerator training on sampling both men and women was clearly highly effective.

Figure 7: Number of End line Respondents in Different Districts

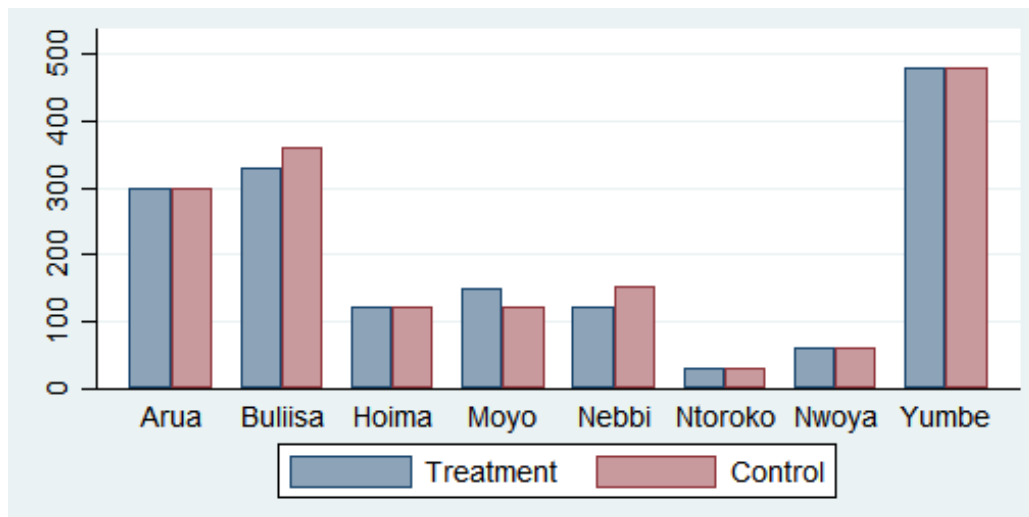
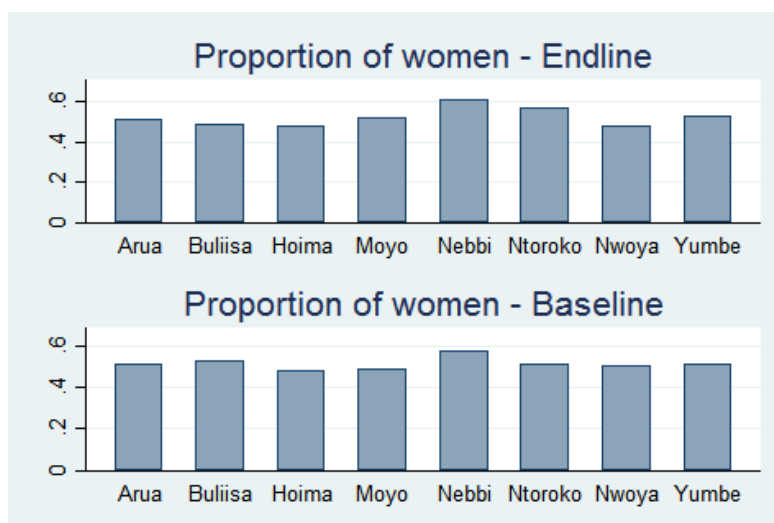


Figure 8: Gender balance



Most respondents were relatively long-term residents of their current home: only approximately 4% of respondents in both the end line and baseline had moved from another home or community within the past year. This suggests that most respondents in our survey should be at least somewhat invested in the communities in which they live; they are not itinerants that happen to be passing through. Additionally, most respondents were between 18 and 45 (approximately 68%), indicating that our study draws primarily on working age adults who should be concerned with caring for their families and the extent of local economic opportunities.

Finally, on the subject of household size, approximately 33% of respondents indicated that their household included nine or more people in both the baseline and the end line. The next most common category was five or six people (~22%-25%), and then seven people (~12%). Very few respondents indicated a household size of less than four people (~8%-9%). These responses may account for the fact that extended families in this region often live together or be highly involved in each other's lives.

Those responses may also be picking up large numbers of children in most families; only 10% of respondents in the baseline and end line reported not having any school aged children. Of those with school-aged children, approximately 81% of respondents indicated that they are attending primary school. Given the more limited availability of secondary schools (see Appendix D), this may indicate that primary school is the highest level of formal education to which many respondents have access.

5. Estimates of Program Impacts

Throughout the results section we report difference-in-difference (DID) estimates of all treatment effects. We calculate these estimates for a dependent (outcome) variable as follows:

- We first calculate the average values of an outcome in the end line and baseline for all respondents in the treatment group. We then subtract the average in the baseline from the average in the end line, which gives us the “treatment difference.”
- We next calculate the average values of an outcome in the end line and baseline for all respondents in the control group. Once again, we then subtract the average in the baseline from the average in the end line, which gives us the “control difference.”
- Finally, we subtract the “control difference” from the “treatment difference.” This is our estimate of the *difference-in-differences*, or DID.

DID Treatment effect – Formal definition

Let \bar{y} represent the arithmetic average of some outcome measure, y , within a subset of sampled respondents. This estimator compares averages within different subsets:

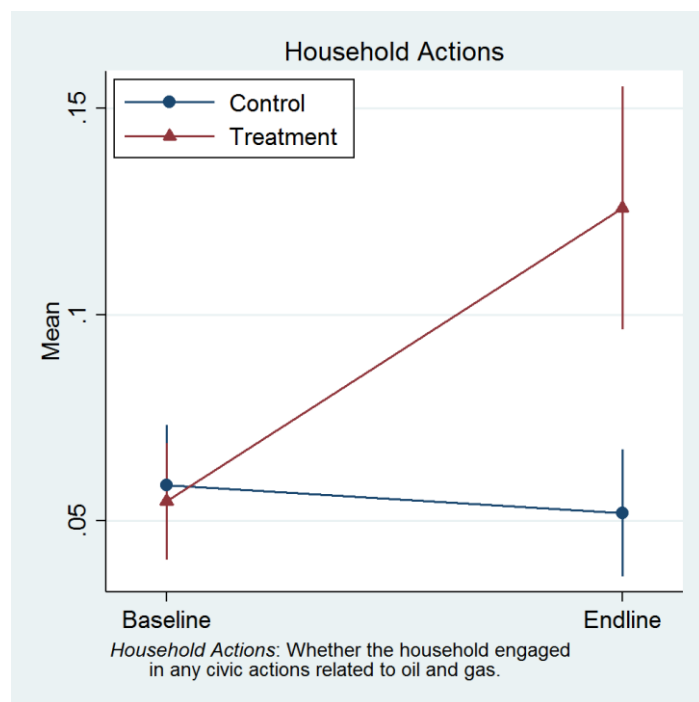
$$(\bar{y}_{\text{endline}|\text{treatment}} - \bar{y}_{\text{baseline}|\text{treatment}}) - (\bar{y}_{\text{endline}|\text{control}} - \bar{y}_{\text{baseline}|\text{control}})$$

The intuition for our study is that DID estimates compare (1) the change in some outcome among treatment village residents between baseline and end line surveys with (2) the change in some outcome among control village residents between the same surveys. A positive effect, for example, means that there was a greater increase between surveys in the treatment group than there was in the control group.

To illustrate this more concretely, turn to Figure 5.1. This figure plots the proportion of respondents in different groups who report someone in their household engaging in any type of civic activity related to the oil and gas sector. At baseline, about 6 percent of respondents from control (circle) and treatment (triangle) communities report that a member of their household engaged in civic activities. By the end line, however, this number doubles in treatment communities (about 13 percent reporting engaging in civic activities) while the percent of respondents who report that someone from their household engages in civic activities decreases to about 5 percent in the control group.

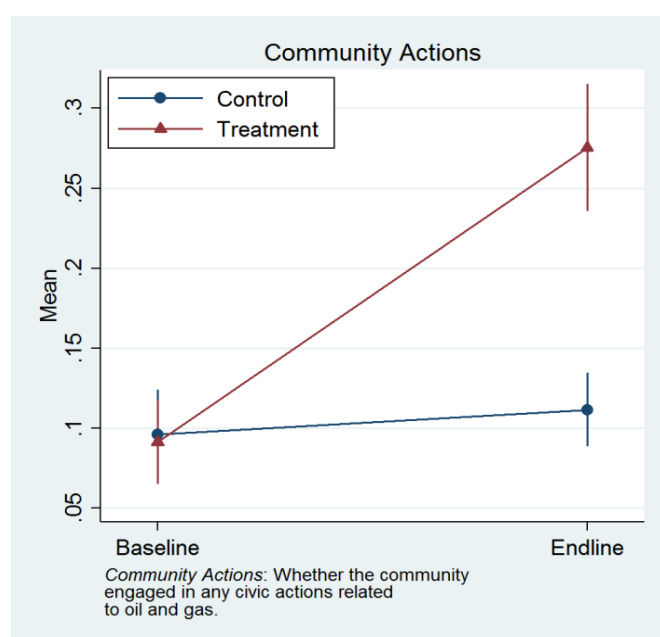
The DID estimate, then, is the difference in the trends between these groups (the difference in the slopes of the lines). We calculate the DID as $(0.13 - .06) - (.05 - .06) = .08$. The substantive interpretation is that the treatment causes an 8-percentage point increase in the amount of household civic engagement in the oil and gas sector.

Figure 9: Change in Household Civic Activity



We find a similar pattern for respondents who report someone from their community engaging in civic activities (Figure 5.2): 10 percent of those from treatment villages reported this at baseline, while 28 percent reported this at end line. In contrast, 9 percent of those in the control group reported community civic engagement at baseline and 11 percent at end line.

Figure 10: Change in Community Civic Activity



We calculate the DID for community action as $(0.28 - .10) - (.09 - .11) = .16$. The substantive interpretation is that the treatment causes a 16-percentage point increase in the amount of community civic engagement in the oil and gas sector.

The formal estimation of the treatment effects comes from a linear regression model,

$$y_{ijt} = \alpha + \beta Treat_{ijt} + \gamma Endline_{ijt} + \tau Treat_{ijt} \times Endline_{ijt} + \varepsilon_{ijt}.$$

In this model, i indexes individual, j indexes villages, and t indexes time (baseline or end line). The estimate of the DID is the parameter τ . We adjust all estimates in this report with robust standard errors, clustered on village to adjust for cluster randomization (all households within a village are assigned to treatment or control group). When doing subgroup analysis, we estimate this equation for only the subgroups indicated. (Most of the subgroup analysis is by gender; therefore, we would estimate separate treatment effects for both men and women). This equation, can in principle, be modified to allow for a set of additional covariates. However, all of the results presented in this section do not include controls. (In the section on robustness, we relax this assumption and include some types of controls.)

Below, we report the DID estimates for our study outcomes of interest. To reiterate, these capture the amount of change that can be attributed to the intervention. Readers interested in comparing the absolute levels of different variables for treatment and control groups across surveys (as in Figure 5.1 and Figure 5.2 above) should turn to Appendix D. We also disaggregate our results by gender of respondents. Although estimating treatment effects over only half the sample does decrease statistical power (*i.e.*, how fine-grained of an effect our tests can identify), this is only an issue in a few instances below.¹¹

¹¹ For certain transparency indicators, and the Index of Issue Satisfaction

Having laid out our strategy for estimating treatment effects, we now turn to presenting evidence on program impacts, using proximate outcomes (e.g. measures of transparency) and distal outcomes (e.g. measures of accountability) identified in the theory of change.

5.1 Transparency

Summary: Overall, the program moderately increased transparency. This increase appears for perceptions of transparency, as well as measures that may capture a more objective existence of transparency. However, the program does not appear to have increased actual knowledge of the oil and gas sector in the area.

Because both treatment and control groups received an information packet (thus, our design did not allow for a true control group), there is reason to expect there may be no significant difference between treatment and control— insofar as “transparency” is defined as simply access to information.

However, in our theory of change, we use the concept of “transparency” to refer to a culture of information sharing between citizens and oil sector decision-makers, and an increased pursuit of information by citizens (spurred by the MSFs’ mandate for participants to share information post MSFs). We therefore expect perceptions of transparency or confidence in being informed to emerge in response to the MSFs, and enable treated communities to demand greater accountability from oil companies and local government officials.

Indeed, we found significant increases in different measures of transparency due to the program. We report these findings in 0. This figure shows estimated treatment effects for several different variables:

- *T/F Percent Correct* (the percent of questions answered correctly on a true and false quiz about the oil sector in the region)
- *Pursue Information* (have respondents tried to get more information about the oil and gas sector?)
- *Awareness* (on a 3-point scale, do respondents feel aware of oil and gas activities?)
- *Information Confidence* (on a 3-point scale, do respondents feel confident in their ability to get information about oil and gas?)
- *Information Outreach* (on a 3-point scale, how often do respondents think that decision-makers provide the public with information about oil and gas?)
- *And Transparency Perception* (on a 3-point scale, do respondents believe decision-makers in the oil and gas sector are open and transparent?)

As the graph of DID estimates shows, the treatment had significant effects on *Pursue Information*, *Information Outreach*, and *Transparency Perception*. Respondents in the treatment group were more likely to report pursue information on oil and gas independently, more likely to report decision-makers giving them information directly, and more likely to broadly perceive oil sector decision-makers as at least somewhat transparent. Additionally, *Awareness* is borderline significant.

Analysing by gender (see 0) shows that the program seems to increase transparency for both men and women by a similar magnitude. In this case, some of the treatment effects are significant for women and not men. However, we expect this is because of decreased statistical power in samples for individual genders and that the true effects are similar for both genders.

It is possible that the increase in transparency perceptions is linked to increased female and male participation in village and oil sector meetings. Those increases are significant as shown in the Civic Activity section below (Section 5.2). Thus, the MSFs increase access to decision-makers, and also lead villages to hold subsequent public meetings that are accessible to a wider group of residents. At these village meetings, information may be discussed and clarified, resulting in better informational outreach and a stronger perception of transparent decision-making.

Figure 11: Transparency Indicators

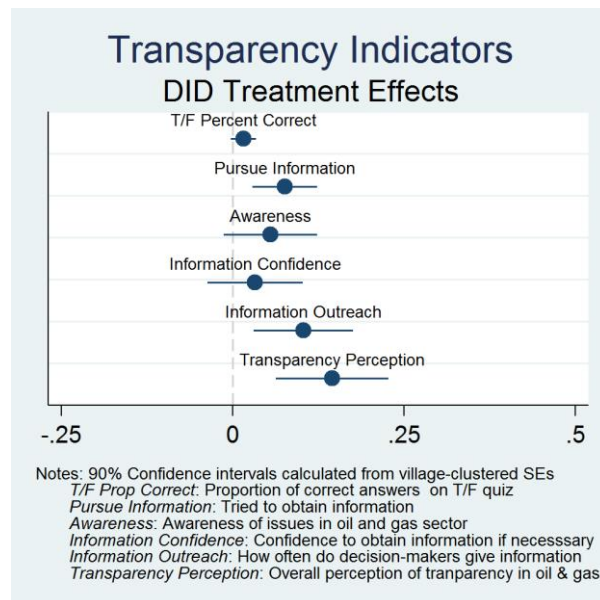
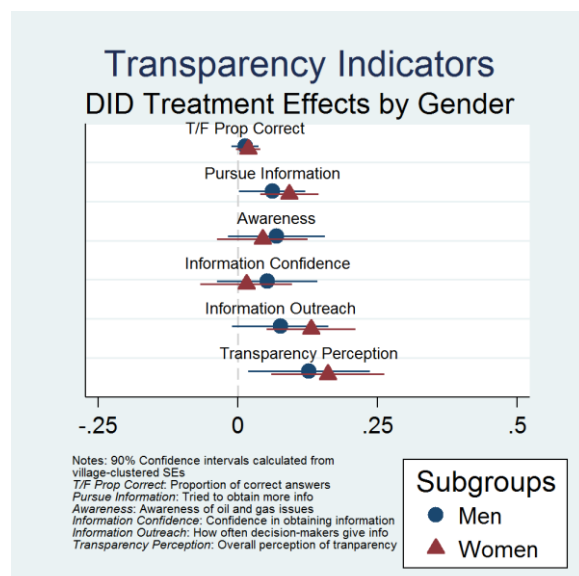


Figure 12: Effects of Transparency by Gender



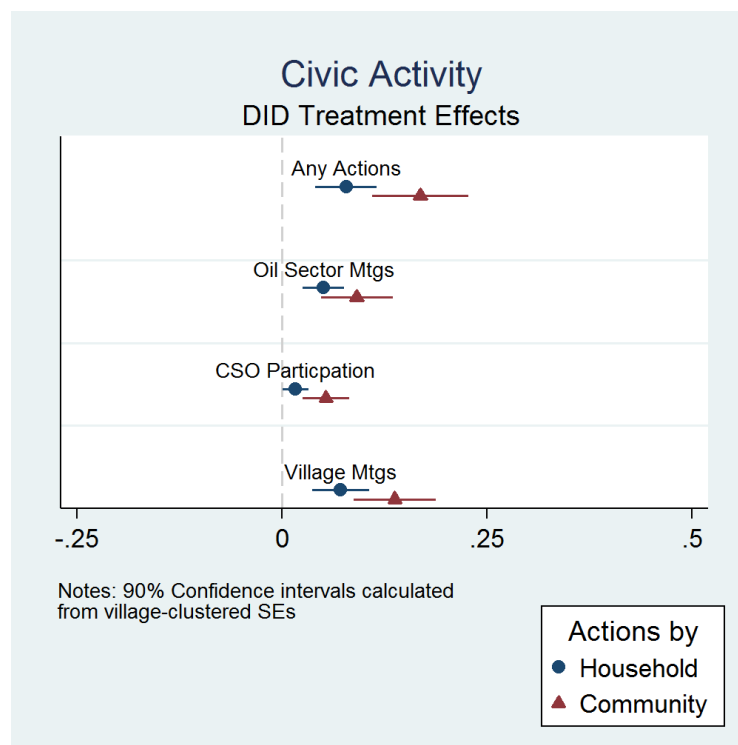
5.2 Civic Actions

Summary: The intervention increases civic activity by households and communities. Much of this civic activity involves communication with decision-makers at this early stage of the oil extraction process (in particular, village meetings and meetings with oil sector representatives). We also report increases in strategic actions such as protests and lobbying efforts in treatment villages, although these events are infrequent enough in the sample that we do not include them in our statistical analysis.

We asked each respondent about two types of civic actions related to the oil and gas sector: those taken by the household itself and those taken by their community. In addition, to gather data on the quality of civic activity, we also asked which of 15 different types of civic actions they took. Many of these types were reported infrequently. We therefore limit our statistical analysis to (1) whether there was any activity taken, (2) meetings with decision-makers in oil and gas, (3) participation with civil society groups,¹² and (4) village meetings. We plot the effect of the program on these civic activities in the region in 0.

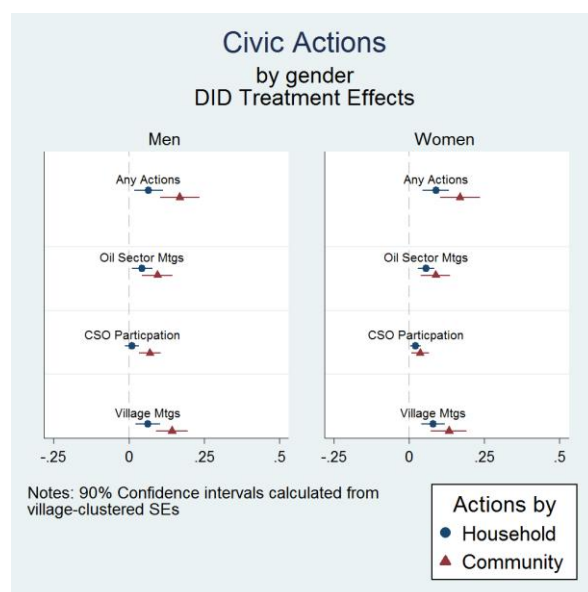
The circles in 0 indicate a positive treatment effect on any activity, oil meetings, civil society participation, and meeting with village leaders at the household level. The triangles indicate positive effects at the community level. A gender lens on civic activity, shown in 0 indicates that the magnitude of these effects is very similar for both men and women.

Figure 13: Civic Actions



¹² Civil Society Organizations (CSOs) include women, youth, farmers, religious, elderly, PWD, credit and savings, and other groups.

Figure 14: Civic Actions by Gender



5.3 Satisfaction Index

Summary: The program improves overall satisfaction for those issues that households care most about. However, there is no evidence that overall satisfaction within any particular issue improves. These results may indicate that responses to the intervention are already targeting household preferences with regard to land management, social services and local economic development.

We want to ensure that communities and households could identify improvement in the issues they deemed more important. Our piloting and MYJ's previous work suggested that land management, social service provision, and local economic development (including employment) were most salient issues. To examine what issues people care most about, we asked each of the survey respondents to rank how relatively important they perceived the three issues areas.

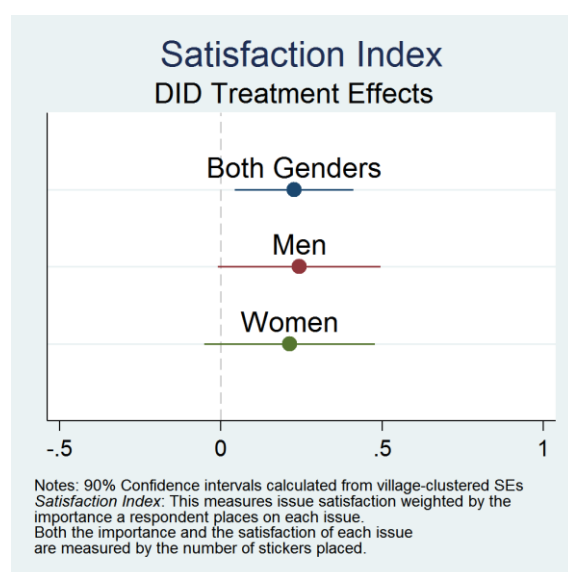
We presented survey respondents with three note cards, each labelled with one of the issue areas described above. We asked respondents to allocate 10 stickers across the notecards, in proportion to how important they thought each issue was. We then asked each respondent why they chose a particular issue as most important. After this task was completed, we placed three additional cards in front of them and asked them to place 0 to 10 stickers in proportion to how satisfied they were with the handling of each issue by the relevant decision-makers. Again, we asked them to explain reasons for their satisfaction.

From these two tasks, the issue importance ranking and the issue satisfaction ranking, we calculated a *Satisfaction Index*. We form the *Satisfaction Index* by using issue importance scores to weight up or down respondents' reported satisfaction with each

issue area. We then sum the weighted satisfaction scores across issue areas.¹³ This method is based on the idea that increased satisfaction with a policy area that the respondent cares little about is less meaningful than increased satisfaction with a policy area the respondent cares about highly.

0 shows the estimated DID treatment effects on this outcome for all respondents as well as subgroups of men and women. The figure shows a positive, significant effect of the intervention on the index. For all households, the intervention improves the *Satisfaction Index* by approximately 0.25 on a 10-point scale. Substantively, this means that the intervention led to a moderate increase in respondents' reported satisfaction with issue areas they prioritized. The other estimates show that the magnitude of this effect is similar for both men and women.

Figure 15: Satisfaction Index



We note here, and show below, that we do not observe significant effects of the treatment on (1) the net importance respondents assigned on average to particular issue areas OR on (2) the net satisfaction respondents reported with any particular issue.¹⁴ We did not have *a priori* hypotheses about changes in satisfaction for particular issue areas—our only hypothesis was that the intervention was likely to increase satisfaction with issue areas respondents prioritized most, whatever those issue areas happened to be. Treatment group respondents are better prepared to demand targeted change from decision-makers on the issues they care most about.

¹³ The summative index is formed as follows: $Satisfaction\ Index_{ijt} = \frac{1}{10} \sum_{m=1}^3 (w_{ijt,m} \times S_{ijt,m})$, where m indexes one of the three issue areas, w is the self-identified importance weight of an issue, and S is the self-reported satisfaction with issue m . The fraction $\frac{1}{10}$ is simply used to scale the index so that the minimum and maximum values reflect the same minimum and maximum values for each issue area (where each issue can receive 0 to 10 stickers for both importance and satisfaction). The satisfaction index thus also ranges from 0 to 10 the value is 0 if the respondent is unsatisfied with each issue area).

¹⁴ Although this is true when looking at the sample as a whole, as we show in Section 5.17 the intervention does affect how issues are ranked in importance by women. The intervention causes women to rank land as less important and social services as more important.

Finally, note that the magnitude of the treatment effect is similar for both men and women, although insignificant for women at the 0.10 level. Despite this, the treatment effect for women is not substantively different, and the insignificance is probably due to dividing the sample in half. In sum, as predicted, the intervention appears to align satisfaction with those issues that a household thinks are most important.

At both the baseline and end line stages of the project we found that the most important issue to people was land management. We thus devote a separate section of this report to examine the effects of the intervention on land management. Smaller sections follow with data regarding the other two issues we covered in our survey: social services and local economic development.

5.4 Land Management

Summary: The program does not appear to significantly improve outcomes in land management (e.g., increased rates of registration and demarcation). However, such impacts may take more time to observe or may be overwhelmed by larger secular trends in land demarcation and registration.

The previous analysis of the *Satisfaction Index* found that the program caused people to be more satisfied with the issues they care about. However, improvement in satisfaction is not evidence of actual improvements in outcomes.¹⁵ In this section, we examine precise program impacts for land management-specific outcomes.

0 shows no significant difference in land ownership, rates of land registration, or rates of outside claims being made on respondents' land. However, we do estimate a significant and negative treatment effect for land demarcation, implying that the MSFs cause people to demarcate their land at slower rates. Note that this does not mean that the MSFs discourage people from demarcating their land, only that the rate of land demarcation is lower in treatment villages than control.

Notes from our qualitative data and process monitoring indicate this may be due to one of three reasons: First, those who participate in the MSFs prioritize other strategies over demarcation after participating in the MSFs. Second, because development of oil and gas was somewhat stultified during the study period, some areas of the study may have yet to feel the full pressure of land conflict that may emerge later in the project cycle. Third, there is a larger secular trend of land demarcation and registration—both treatment and control villages have increased activity in land over the time period. These larger trends, driven by other government programs, may simply overwhelm the effects of the program, especially in control villages where they may be unaware of other strategies they might employ to cope with changes in the oil and gas sector.

¹⁵ *I.e.*, respondents may simply be feeling more satisfied with the *status quo*.

Figure 16: Land Issues

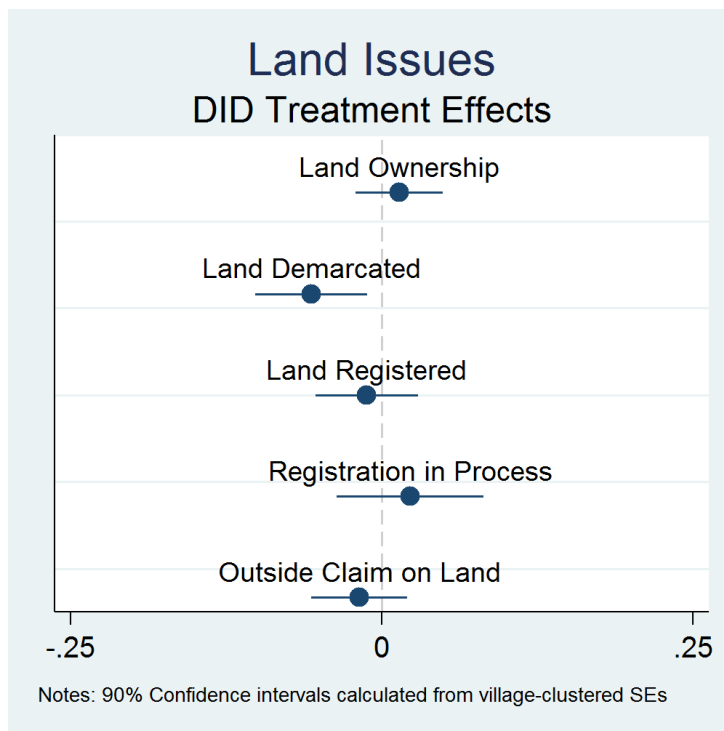
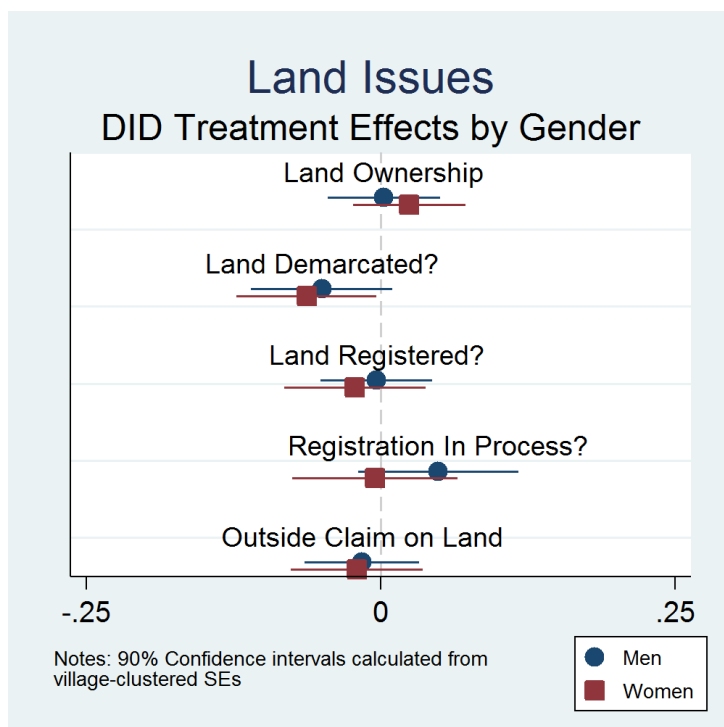


Figure 17: Land Management by Gender



Across genders, the treatment effects on land management issues remain similar, as reported in 0. However, there does appear to be a different effect on whether land is in the process of registration. *Registration in Process* shows positive impacts for men and negative impacts for women (although neither is statistically significant at the 0.10 level).

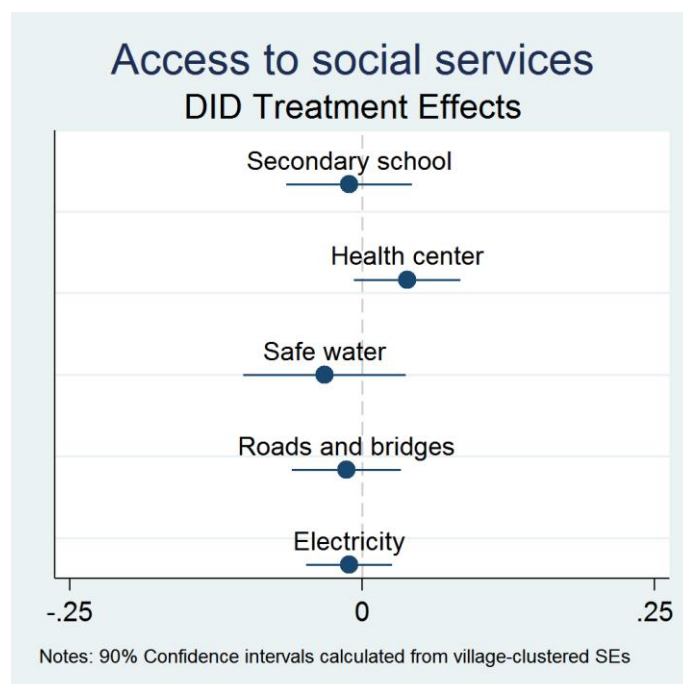
5.5 Social Services

Summary: The program does not appear to significantly improve outcomes that measure access to different social services. However, such impacts will likely take more time to appear and therefore would not be picked up in the end line survey due to our accelerated timeline.

Respondents were asked in the baseline and end line whether they had access to a number of different social services. Treatment village respondents, being better prepared to demand accountability from various levels of local government, may over time gain improved access to some or all of these services. DID estimates in 0, however, suggest that this has not yet occurred (at least between the treatment and the end line survey).

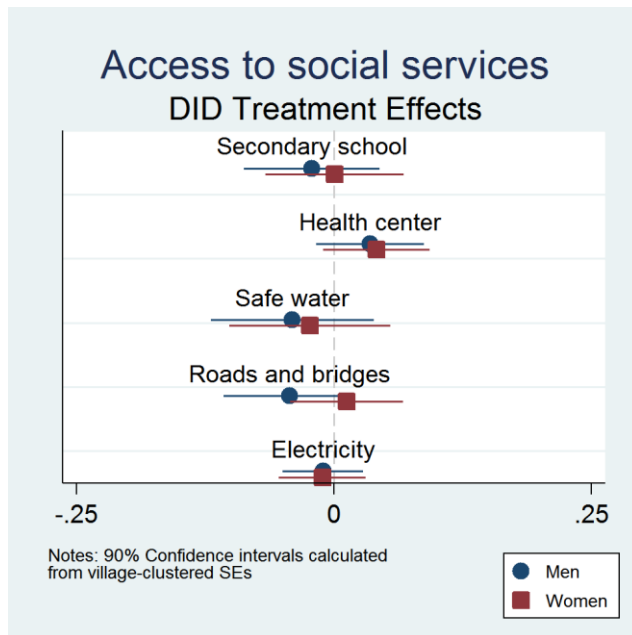
Note that this result is likely not due to a “ceiling effect.” It is true that a treatment effect could *hypothetically* not be observed because access to these social services is already as high as it could plausibly go. As can be seen in more detail in the descriptive figures in Appendix D, that is almost certainly not true for this study. For example: only approximately 50% of respondents in the end line and baseline have access to secondary schools; only approximately 5% have access to electricity; and only approximately 65% have access to safe drinking water.

Figure 18: Access to social services



0 below shows that similar null effects are seen when considering respondents broken down by gender. The only possible exception is that men were *almost* significantly less likely to improve access to roads and bridges. This is probably a result of random error; there is no clear theoretical explanation why only men would lose access to roads, or how roads and bridges in general might disappear over a short period of time.

Figure 19: Access to social services – by gender



5.6 Local Economic Development

Summary: Similar to above, we do not find strong evidence for program impacts on most measures of access to the benefits of local economic development. Again, such impacts will likely take more time to appear and therefore would not be picked up in the end line survey due to our accelerated timeline. One exception is that *we do find* evidence of significant program impacts that increase access to markets.

Respondents were asked several questions about their participation in the local economy, and different benefits (particularly employment and skills training) they might have received due to oil development in the region. The questions we focus on for this analysis are:

- Is someone in your household a member of a business association for farmer cooperative?
- Has someone from your household participated in a skills training program (welding, cooking, etc.)
- Has someone from your household been directly employed by an oil company?
- Has someone from your household been employed in a job that supports oil development in the region?
- Do you have access to markets?

0 shows only significant change resulting from the treatment is in reported access to markets and 0 indicates that this result holds for both male and female respondents.

Figure 20: Local economic development

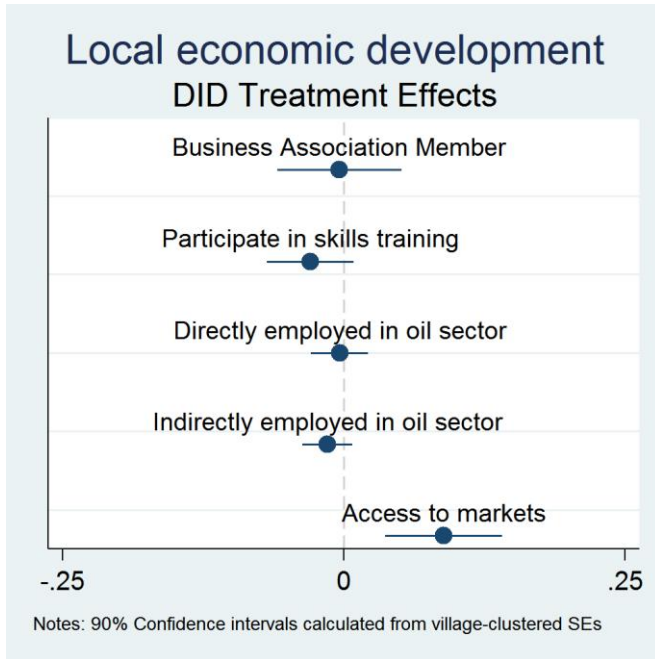
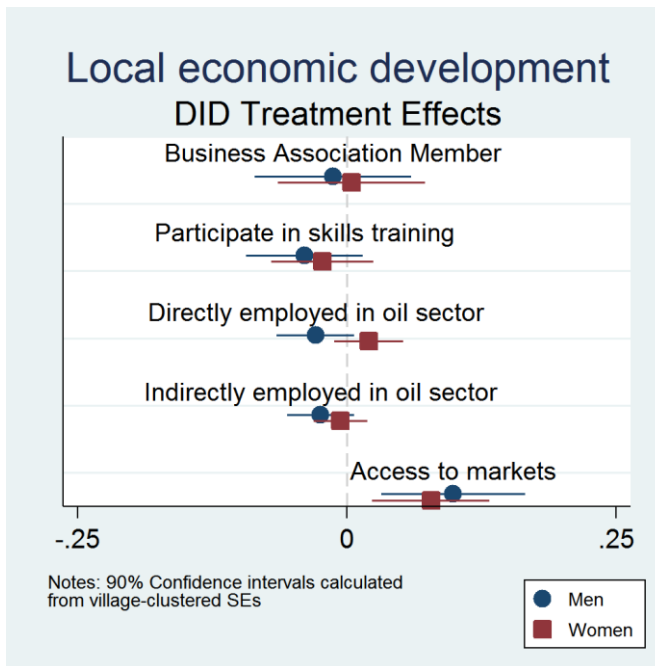


Figure 21: Local economic development – by gender



This result is worth considering more deeply. It appears that in the baseline, 83% of control respondents indicated having access to markets, while only 74% of treatment respondents did. In the end line survey however, this number changes to approximately 83% for respondents in both groups. In other words, the treatment appears to have caused a difference arising from random selection in the baseline to be *equalized away* by the time of the end line survey. This may be a result of respondents in the treatment group sharing more information at a community level. This suggests that limited benefits from local economic development may not only arise because those benefits do not exist— they may also arise because people are not aware of them.

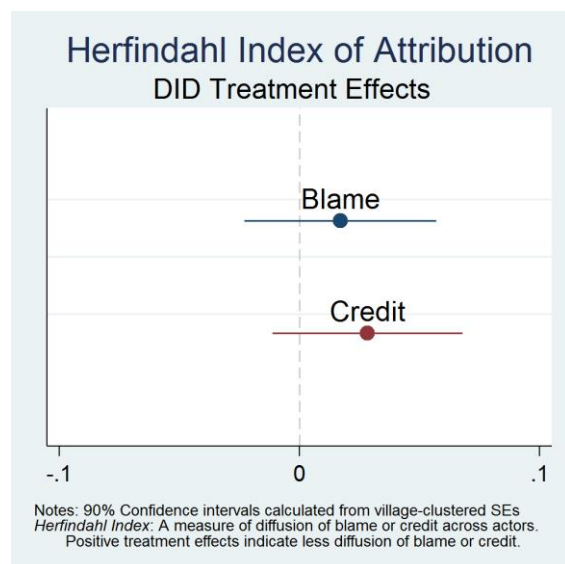
5.7 Attribution of Responsibility

Summary: There is no significant evidence that the treatment concentrates blame and credit on fewer actors. However, these effects may take some time to change as people interact and observe the actions of the various actors in response to their preferences.

We are also interested in how people attribute responsibility for the conditions to different political actors. Similar to the issue importance ranking task, we asked respondents to place stickers among six key decision makers (the community itself, village leaders, LC1, subcounty leaders LC3, district leaders LC5, national leaders, oil companies, or civil society organizations). We asked them to place 10 red stickers among cards labelled with these leaders in proportion to the amount of blame they placed on each one. We then had them place 10 green stickers on the cards in proportion to the credit they gave each decision-maker. Finally, we asked them why they attributed blame or credit to a particular source.

We hypothesized in the project proposal that people who attended the MSFs would learn about the roles different decision-makers have in the oil and gas sector. We argue that this would provide a clarifying force to propel respondents to allocate credit and blame among those actors most responsible for the issues they care about. Thus, we argued, the attribution of credit and blame would be less diffuse after exposure to the intervention.

Figure 22: Herfindahl Index of Attribution

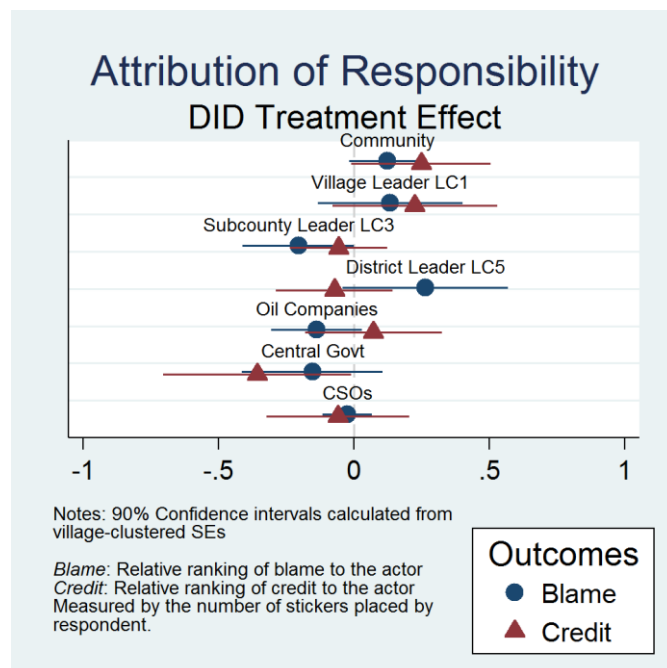


To calculate the diffusion of credit and blame, we formed a Herfindahl index across the 6 actors for each individual. The Herfindahl index (see, e.g.: Kwoka, 1985, Rhoads, 1993) is a measure of dispersion, ranging from 0 to 1 (where 1 means complete concentration of credit/blame on one actor and 0 means perfectly equal blame across all actors). Using this measure of dispersion, we then assessed whether the treatment decreases the diffusion of blame (thus, blame and credit would be concentrated on fewer individuals). 0 shows these results.

There were no significant impacts of blame or credit diffusion due to treatment. Both Herfindahl indexes for Blame and Credit increase due to treatment, thus implying more concentration; however, these effects are not statistically significant at the 0.10 level.

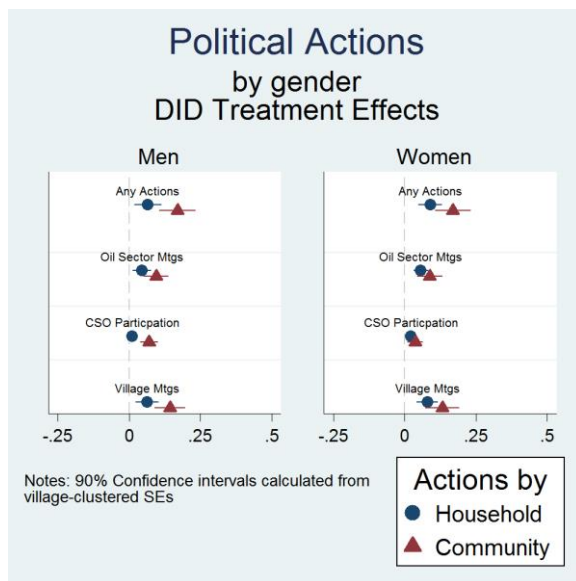
Although we did not have an a priori hypothesis about *how* blame and credit would shift between actors, we also investigated whether there was a systematic shift among actors due to the treatment. We report these results in 0. There is some modest evidence that sub-county leaders (LC3) receive less blame and central government leaders receive less credit due to the treatment, but there is no strong theoretical reason to expect these shifts.

Figure 23: Attribution of Responsibility



Finally, we examine the DID (differences in difference) of the allocation of blame and credit to different actors by gender. 00 presents these results. There is some difference between genders. The treatment causes men to increase blame to district leaders (LC5) and away from the central government. Meanwhile, the intervention causes women to decrease blame to sub-county leaders (LC3) and give less credit to the central government. During our baseline analysis we found that women tended to blame local actors and credit central actors, while men did the opposite (see the section on descriptive statistics). The intervention appears to remove those differences so that blame is allocated similarly for men and women in the end line (again, see descriptive statistics for the end line data).

Figure 24: Attribution of Responsibility by Gender



5.8 Summary Table of Results

Some readers prefer a formal table of results. We summarize the mean baseline/end line, treatment/control, and DID estimates estimated with robust standard errors in 0. These are identical to the figures above, but provide precise numeric values for the quantities used to make the preceding figures.

Table 4: Mean values and differences of outcomes across time and treatment group.

	Baseline			End line			Diff-in-Diff
	Mean Control	Mean Treatment	Difference	Mean Control	Mean Treatment	Difference	
Composite Index of Issues	3.883 [n=1581]	3.742 [n=1566]	-0.141* (0.08)	3.970 [n=1609]	4.064 [n=1579]	0.095 (0.10)	0.236** (0.11)
Issue ranking: Managing land rights	4.122 [n=1618]	4.019 [n=1583]	-0.103 (0.16)	4.867 [n=1620]	4.900 [n=1590]	0.033 (0.16)	0.136 (0.14)
Issue ranking: Receiving access to social services	3.680 [n=1618]	3.631 [n=1583]	-0.049 (0.12)	3.349 [n=1620]	3.308 [n=1590]	-0.041 (0.13)	0.008 (0.12)
Issue ranking: Improving household access to local economic development	2.198 [n=1618]	2.350 [n=1583]	0.152 (0.10)	1.784 [n=1620]	1.792 [n=1590]	0.008 (0.10)	-0.144 (0.11)
Satisfaction: Managing land rights	3.960 [n=1581]	4.128 [n=1566]	0.168 (0.19)	4.485 [n=1609]	4.839 [n=1579]	0.354* (0.21)	0.186 (0.18)
Satisfaction: Receiving access to social services	3.966 [n=1581]	3.660 [n=1566]	-0.307* (0.16)	4.175 [n=1609]	3.702 [n=1579]	-0.474*** (0.18)	-0.167 (0.16)
Satisfaction: Improving household access to local economic development	1.822 [n=1581]	1.998 [n=1566]	0.176 (0.11)	1.324 [n=1609]	1.435 [n=1579]	0.111 (0.10)	-0.065 (0.15)
Prop Correct T/F Transparency Questions	0.272 [n=1454]	0.268 [n=1406]	-0.003 (0.02)	0.340 [n=1591]	0.352 [n=1557]	0.012 (0.02)	0.016 (0.01)
Have you tried to get information from that source?	0.196 [n=1570]	0.184 [n=1536]	-0.012 (0.03)	0.173 [n=1592]	0.237 [n=1566]	0.064*** (0.02)	0.075*** (0.03)
Aware of the activities going on in the oil sector that affect you	1.662 [n=1616]	1.691 [n=1580]	0.028 (0.04)	1.751 [n=1619]	1.834 [n=1589]	0.083 (0.05)	0.055 (0.04)
Confident that you can get information you might need	1.854 [n=1598]	1.889 [n=1562]	0.034 (0.04)	1.932 [n=1614]	1.999 [n=1586]	0.067 (0.04)	0.032 (0.04)
How often do decision-makers give your community information	1.500 [n=1443]	1.540 [n=1392]	0.041 (0.04)	1.603 [n=1549]	1.746 [n=1542]	0.143*** (0.04)	0.103** (0.04)
Are these decisions generally open and transparent?	1.842 [n=1306]	1.864 [n=1259]	0.023 (0.05)	1.804 [n=1414]	1.972 [n=1441]	0.167*** (0.06)	0.145*** (0.05)

Household-Any Actions	0.059	0.055	-0.004	0.052	0.126	0.074***	0.078***
	[n=1518]	[n=1499]	(0.01)	[n=1579]	[n=1549]	(0.02)	(0.02)
Household-Oil Sector Meetings	0.032	0.031	-0.001	0.032	0.081	0.050***	0.051***
	[n=1518]	[n=1499]	(0.01)	[n=1579]	[n=1549]	(0.01)	(0.01)
Household-Protests	0.005	0.005	-0.001	0.003	0.011	0.008*	0.008
	[n=1518]	[n=1499]	(0.00)	[n=1579]	[n=1549]	(0.00)	(0.01)
Household-Participate with CSOs	0.022	0.016	-0.006	0.013	0.023	0.011	0.016*
	[n=1518]	[n=1499]	(0.01)	[n=1579]	[n=1549]	(0.01)	(0.01)
Household-Village Meetings	0.038	0.029	-0.008	0.031	0.094	0.063***	0.071***
	[n=1518]	[n=1499]	(0.01)	[n=1579]	[n=1549]	(0.02)	(0.02)
Community-Any Actions	0.096	0.091	-0.005	0.112	0.275	0.164***	0.169***
	[n=1314]	[n=1304]	(0.02)	[n=1426]	[n=1427]	(0.03)	(0.03)
Community-Oil Sector Meetings	0.066	0.069	0.003	0.081	0.174	0.094***	0.091***
	[n=1314]	[n=1304]	(0.02)	[n=1426]	[n=1427]	(0.02)	(0.02)
Community-Protests	0.008	0.003	-0.005*	0.009	0.015	0.006	0.011*
	[n=1314]	[n=1304]	(0.00)	[n=1426]	[n=1427]	(0.01)	(0.01)
Community-Participate with CSOs	0.042	0.028	-0.014	0.032	0.071	0.039***	0.053***
	[n=1314]	[n=1304]	(0.01)	[n=1426]	[n=1427]	(0.02)	(0.01)
Community-Village Meetings	0.059	0.052	-0.006	0.072	0.203	0.131***	0.137***
	[n=1314]	[n=1304]	(0.02)	[n=1426]	[n=1427]	(0.03)	(0.03)
Land Ownership	0.847	0.868	0.021	0.848	0.884	0.035	0.014
	[n=1608]	[n=1578]	(0.02)	[n=1616]	[n=1589]	(0.02)	(0.02)
Land Demarcated	0.744	0.761	0.017	0.831	0.792	-0.040	-0.057**
	[n=1499]	[n=1506]	(0.03)	[n=1546]	[n=1536]	(0.03)	(0.02)
Land Registered	0.160	0.141	-0.019	0.125	0.094	-0.031*	-0.012
	[n=1331]	[n=1323]	(0.02)	[n=1432]	[n=1412]	(0.02)	(0.02)
Land Registered or In Process	0.348	0.344	-0.004	0.328	0.334	0.007	0.011
	[n=1331]	[n=1323]	(0.04)	[n=1432]	[n=1412]	(0.03)	(0.03)
Claim on Land	0.156	0.188	0.032	0.153	0.167	0.014	-0.018
	[n=1553]	[n=1528]	(0.02)	[n=1591]	[n=1561]	(0.02)	(0.02)

Notes: Two tailed hypothesis tests: ***p<0.01, **p<0.05, *p<0.10. Village-clustered standard errors in parentheses. Sample size in brackets.

6. Qualitative Results

This section provides information drawn from the qualitative data we gathered in the baseline and end line surveys. Due to the sheer amount of data, we were not able to include it all in this report. However, we report here the most salient findings that add context to the quantitative results reported above.

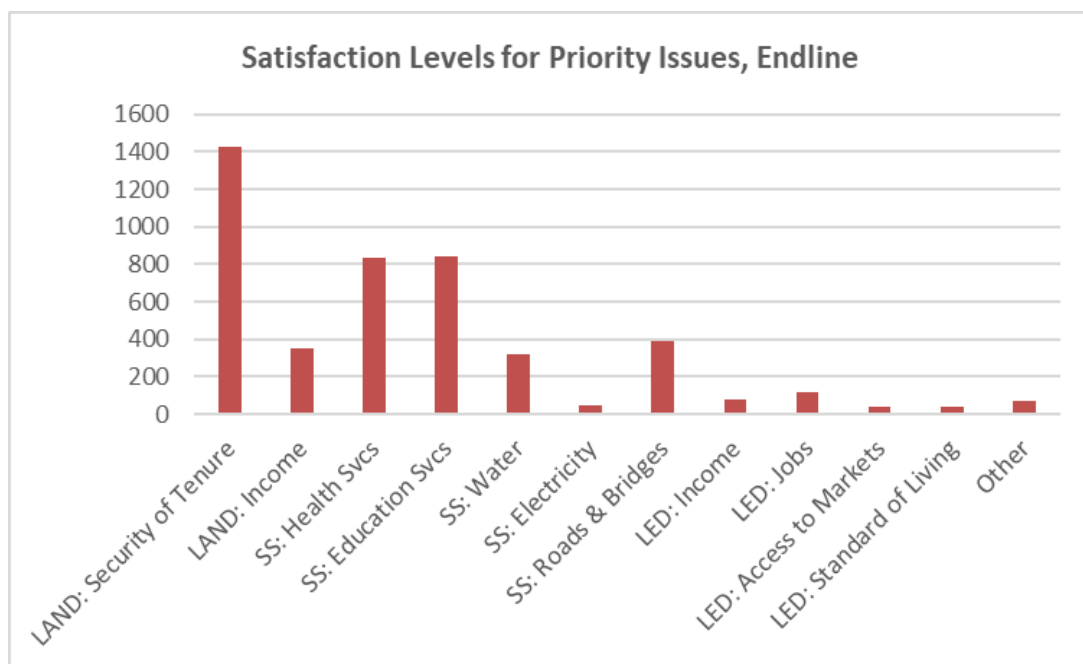
As noted, the study is primarily an impact assessment based on a RCT. However, we also probed for qualitative data to help explain the respondents reason and rationale and to illuminate their experience in oil and gas and the MSFs. Within the context of the household survey, we asked open-ended questions about the issues they cared about the most (among land management, social services, or local economic development), why they attributed blame or credit to different actors, and the nature of their household's civic activities. The results from these questions are summarized below.

6.1 Satisfaction

We begin with a short summary of responses on issue satisfaction. We explore responses to questions about different issue areas in more detail below.

Reasons respondents gave for why they indicated they were most satisfied with different issues are grouped into categories along the x-axis in 0. Clearly, respondents were most satisfied with land more frequently than other issue areas. Generally, this was due to their perceptions of secure land tenure. Respondents typically indicated that they were most satisfied with social services because of access to health or education (for descriptive data on rates of access to these, see Appendix D). The few respondents who indicated they were most satisfied with local economic development were most likely to link this to their access to stable jobs and different sources of income.

Figure 25: Qualitative responses on issue satisfaction



6.2 Land management

In addition to residents' high rating of the importance of land, our concern about land rises from MYJs previous work. They found that residents in areas where oil development had begun faced land grabbing, as well as conflicts arising from practices such as communal use of land that did not easily permit formal claims of ownership. At the start of the study in 2015 we expected more intense oil development, and did not anticipate the impacts of low oil prices and generally slow pace of development in the Albertine Graben. Thus, many communities in our sample (treatment and control) have not yet experienced true oil development. We extract quotes below based on our coding structure (see Appendix A), and the frequency of different themes and language.

Summary:
Land is of highest importance regardless of time and treatment.
Land is important both for its intrinsic and utilitarian values.

The intrinsic value placed on land was striking when we asked respondents why they prioritized land issues. This was the most common response in our qualitative data. Men and women expressed equally strong sentiments and used similar language to describe why land is most important to them. Commonly used phrases include:

Land is my life
Everything I do is on land
Life depends on land

Some direct quotes, which are typical of respondents' expression of the value of land are provided below:

- *Without land I am nothing, everything is from land.*
- *Without land you are nobody even if you are educated.*
- *Land is important. Without land there is no life.*
- *Land is the foundation of everything.*
- *If it was not that I live on land I would have no importance.*

The second most important reason given for valuing land was its utilitarian value, and stated widely and across genders in responses about why land is important:

Grow crops for food
Sell for cash
Earn a living
Keep my children
Building roads

Main livelihood source
Feed my children
To have a settlement to live
To bury family member

- *Land is the only inheritable resource I can leave for my children.*
- *I grow my food crops like maize, sweet potatoes, cassava on land and I also can lease it out to any business man and I can keep earning money*
- *Land is everything. Even roads, schools, health centres are constructed on land.*
- *Without Land, you cannot be able to carry out any activity.*
- *When companies get oil in my land they will pay me a lot of money which I will use for my family. I have not witnessed any conflict over this land here.*

The reasons for land's importance in the baseline, particularly its intrinsic value, were similar to the end line, and similar for those villages exposed to the program and those that were not. Thus, the central importance of land remains high independent of time and treatment.

Despite this, our data also show that only approximately 34% of respondents in the baseline and end line indicated that their land is formally registered. Meanwhile, as noted when over-viewing DID estimates, land demarcation appears to have decreased slightly in response to the treatment. We can provide only a speculative explanation for this. It may be that many residents in the study area currently do not feel their land is threatened. A figure in Appendix D, for example, shows that outside claims on land were only reported by approximately 15% of respondents in most districts.¹⁶ If this is the case, it remains an open question how communities will react to claims that occur in the future, and whether treatment and control villages from this study may respond to such claims differently.

6.3 Social Services

Among social services, health and education were discussed the most. There was no significant difference between males and females.

Health centers were identified as important because:

...Social services like health centers are important because life depends on health centers incase of sickness.

...when my child is sick I can get treatment from the hospital.

...without social services like Hospitals or health centers there will be no treatment of the sick and actually we all die.

¹⁶ An exception is among respondents in Nwoya District. Around 50% of respondents here indicated outside claims. However, this district included only 4 study villages, and represents a small fraction of our sample.

...health centres are near, we easily access drugs and even these young ones easily go alone.

... if we have better health facilities people will be healthy and all the people will be strong to work and they will be economically stable.

... things like health centres which helps people to get drugs to reduce the high rate of death.

...health centres if it is to be near it would help our ladies for antenatal cases so I choose it to be of great importance.

Education is often mentioned alongside health for a combination of finding a pathway to better jobs and better livelihoods, as well as for obtaining knowledge.

Education as a means to better livelihoods:

- *Social services are most important like schools make our children to get educated and get employed at the end of their education.*
- *When schools are built it can open the eyes of the following children and can in future bring other development in the area.*
- *Education helps to provide skills and knowledge to our children which will help them to get better jobs in future.*
- *We want our place to develop in terms of education and this will increase employment opportunities because our place has been behind.*
- *Without services like schools, our children will not get well paid jobs.*

Education for knowledge:

- *Having a school is the most important thing to me because it is where our children get knowledge from.*
- *Education opens mind and it clears future for our children.*

Note that although the oil sector is not active in most of our study areas, refugee camps are now present in the North (housing refugees from the conflict in South Sudan). An interesting qualitative finding is that, according to respondents, nearby camps appear to impact social services and local economic development through increased access to jobs and health care. We discuss a robustness test based on this in Section 7.

6.4 Local economic development

Qualitative data indicate that those who expressed high importance for local economic development were largely concerned about jobs; although income, access to markets and other benefits were also mentioned. The comments relating to why jobs are important cover some expected reasons, largely respondents' interest in being able to care for their families.

- *When I am employed it can change my family and also my community and people around.*
- *Opportunities for local Economic Development are important most because when you get jobs, you will be able to care for your family.*

Improved standard of living

- *This improves the standard of life. That is, when employed we can change the way he lives. E.g. eating well, living a happy life and enjoying all the positive benefits.*
- *Local economic development is more important for me because when the refugees were brought my daughter job with world vision which has improved well-being of my family.*
- *The idea of creating jobs will be the most important thing because when you are employed everything becomes almost possible.*

Ability to pay for education

- *Opportunities for local economic development are important because when people get jobs, they pay their children to high quality schools.*
- *I have a job I can do everything I want like constructing houses, buying land and even paying school fees.*
- *There are a lot of children in this area who have attained various levels of Education. Having jobs would make them self reliant getting their needs from their own pockets.*

Help in old age

- *Improving my household job opportunities is most important to me because when my children get jobs, they will use this to help me in future when am old.*

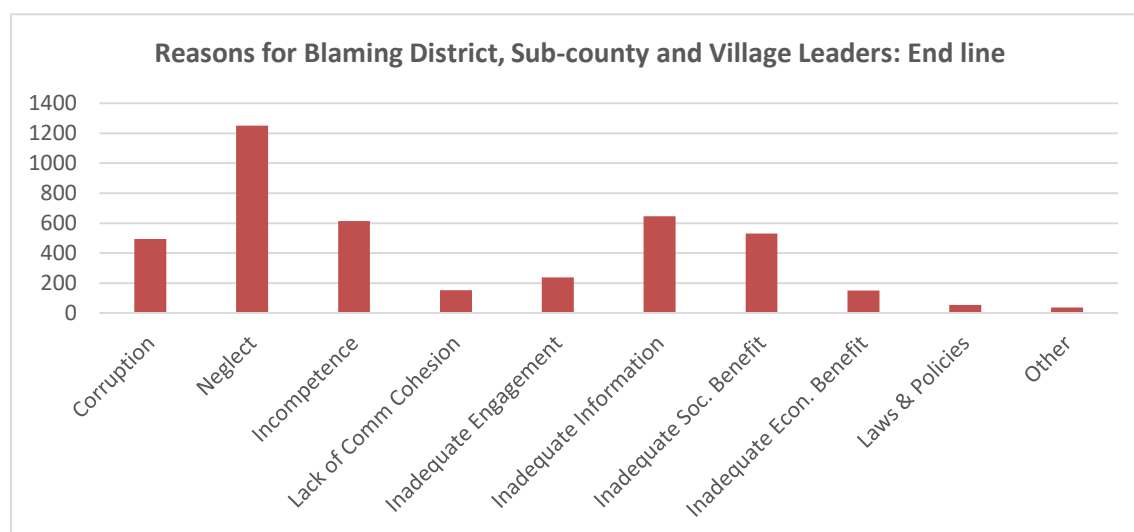
Meeting basic needs

- *I consider local economic development of great importance because my job helps me to get money to support my family with food, materials, shelter in form of house etc*
- *If people are employed there will be no poverty at the house-hold levels.*

6.5 Attribution of blame and credit

Qualitative data indicate that most blame in the end line survey, regardless of gender, is placed on neglect and most credit is due to good leadership. The attribution of these traits is dispersed across different decision makers, consistent with findings from the quantitative data. This is a slight change from the baseline, where the primary reasons for blame were the benefit gap (inadequate social benefits) and corruption for both males and females. More detail is provided below on how respondents described neglect and good leadership.

Figure 26: Qualitative responses on attribution of blame



6.5.1 Blame due to neglect

Respondents citing neglect to explain their most-blamed actor tended to focus on more distant actors such as the central government, the district government, CSOs and oil companies. However, it was still relatively common for accusations of neglect to be levelled at local governing authorities. In explaining accusations of neglect, some argue that decision makers give priority to their own home areas or their own families or ethnic group while ignoring others. Others emphasized that their elected leaders (often members of Parliament) lose interest in local opinions the second an election is over. There is also concern about decision-makers not providing benefits that other villages have, about unfulfilled promises that were made to shore up support in an election, and about decision makers not listening to the public or fulfilling duties such as maintaining social services and delivering information to the public.

There does not appear to be any striking pattern across treatment groups or gender regarding claims of neglect. From a gender perspective, women in the control group stated that they blamed government authorities because of the lack of social benefits (consistent with the baseline), whereas women in the treatment group placed most blame on neglect. Post-treatment, both men and women placed far more blame on neglect than on corruption, as they had in the baseline. For examples of these explanations, see below.

Our LC5 do not know about people in Abunia since he is from Ajiru, he develops his own place hence leaving us abandoned from government programs.

The MP has not come to us in the village or the school since he was elected. But we hear he is going to other places.

... blame the district leader most because he favours other sub-counties and village when it comes to allocation of things like boreholes that's why we don't have safe water.

LC5: because he is not monitoring the activities of the people employed to work in social services like the teachers in the schools, nurses in the health centres, they are not performing. He does not come to listen to us for our needs since he was elected in office.

Village leader (L.C1). Village leader cannot call the village in time and he cannot deliver us with some information from the higher offices that is why I blame him the most.

6.5.2 Credit due to good leadership

For attribution of credit, good leadership and social benefits stand out as the main reasons. Respondents provided a complex picture of good leadership. It is characterized by a broad and impressive set of traits. Some that are mentioned often include:

Fairness,

→ *When we report any issue or problems, our LC1 knows very well how to solve them and he is very just.*

The ability to maintain peace,

→ *Central government carries the most credit because we stay in peace without war in Uganda*

Welcoming oil companies,

→ *I thank LC3 for welcoming people of oil companies to do development in this area.*

Helping to maintain a moral standard,

→ *Our LC3 is fairly doing okay he have stopped discos at night, he also stopped market which people used to attend at night.*

Hosting refugees,

→ *Our county is nowadays hosting refugees and we are benefiting from the activities in refugee camps all these are because of food security.*

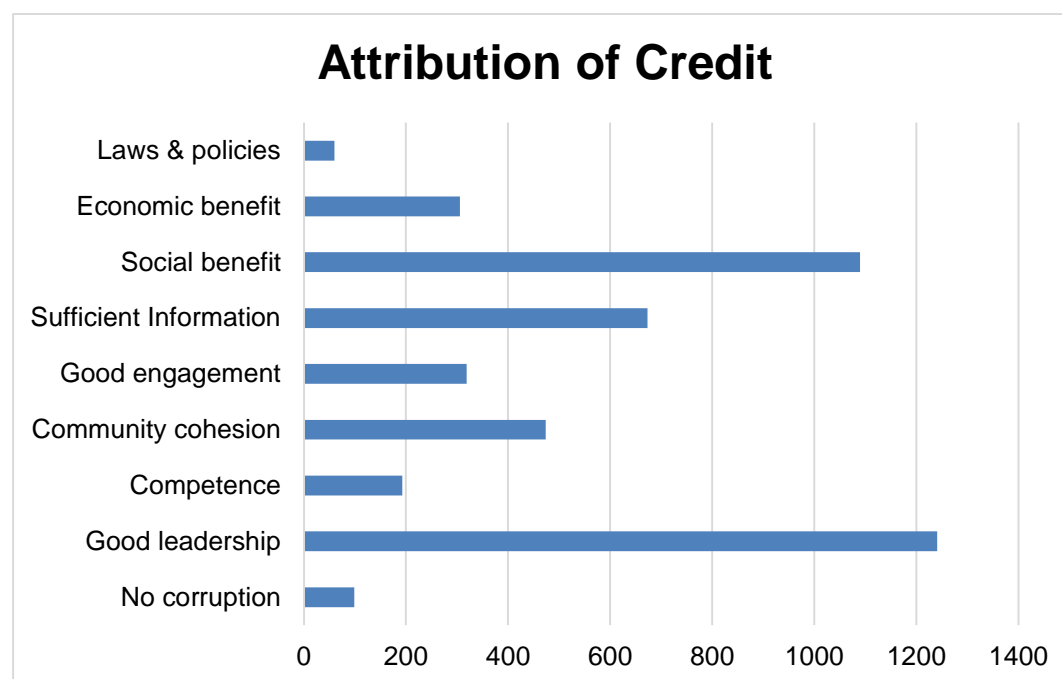
Safety,

→ *I give the most credit to LC1 because he always calls us for meetings. He even sometimes registers new members/visitors in the village for our safety since we are far from police station.*

And a host of other reasons that blend in with sharing information, calling meetings, unifying people, and so on. Comments on social benefit are largely focused on increased access to schools that are free and health centers that are well-equipped and where service is respectful.

Though blame and credit are widely dispersed, they reflect the wide range of considerations that show considerable sophistication among respondents about wanting a just society that is transparent, accountable and equitable.

Figure 27: Qualitative responses on attribution of credit



6.6 More detail on civic activities

In addition to asking respondents about their household or community’s participation in civic activities *in general*, we also asked respondents if they engaged in civic actions and if so, what action. There appear to be noteworthy differences between treatment and control groups in activities that were not frequent enough to include in our DID estimation. We report data on these actions in Table 5, at the household level, and Table 6 at the community level.

Table 5: Reported Action at the Household Level¹⁷

	Men		Women	
	<i>Treatment</i>	<i>Control</i>	<i>Treatment</i>	<i>Control</i>
Protest (end line)	7	3	10	2
Protest (baseline)	5	4	1	4
Vote (end line)	13	5	14	8
Vote (baseline)	12	6	11	14
Meet LC3 (end line)	9	5	6	5
Meet LC3 (baseline)	9	9	8	10
Meet LC5 (end line)	1	2	1	3
Meet LC5 (baseline)	3	3	3	5

¹⁷ LC3 is the head of the sub-county government, and LC5 is head of the district government.

Table 6: Reported Action at the Community Level

	Men		Women	
	<i>Treatment</i>	<i>Control</i>	<i>Treatment</i>	<i>Control</i>
Protest (end line)	10	7	11	6
Protest (baseline)	2	7	2	4
Vote (end line)	21	8	24	10
Vote (baseline)	15	19	11	11
Meet LC3 (end line)	18	10	13	9
Meet LC3 (baseline)	14	24	6	12
Meet LC5 (end line)	5	6	3	5
Meet LC5 (baseline)	5	12	2	7
Lobbying (end line)	9	0	8	1
Lobbying (baseline)	3	4	0	3

Below, we explore additional information about civic activity in these villages that can be fleshed out through the descriptive and qualitative data.

6.6.1 Attendance at oil sector and village meetings

Most of the change in civic activity can be attributed to increases in community-level attendance at oil sector meetings in treatment villages. This increase was statistically significant for both male respondents (55 to 133, a 142% increase) and female respondents (35 to 116, a 231% increase). See Figure 6.4. A similar pattern is seen for attendance at meetings with village leaders (Figure 6.5).

Figure 28: Attending oil sector meetings, community level

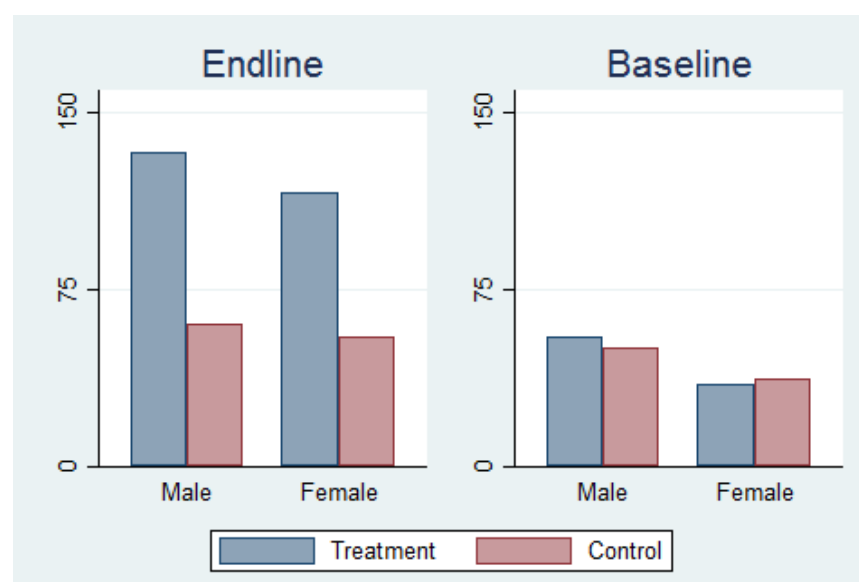
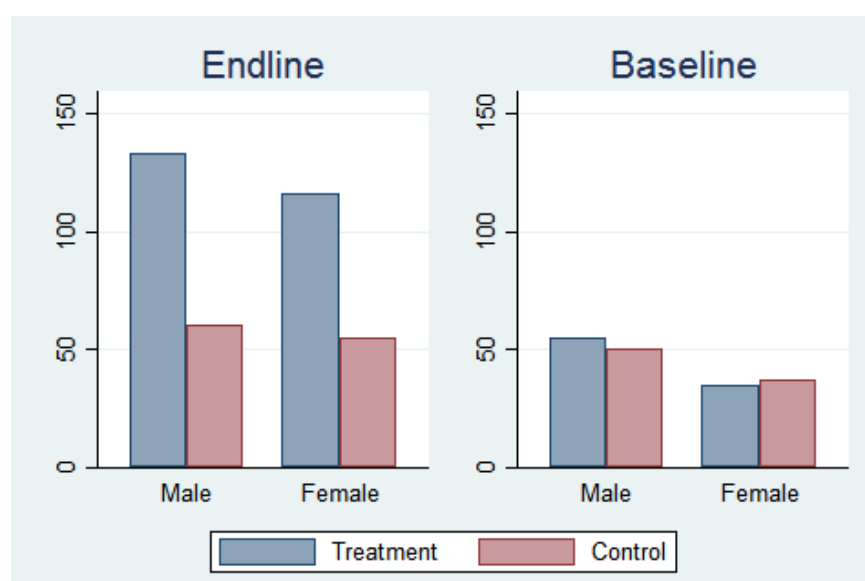


Figure 29: Attending village leader meetings, community level



6.6.2 Lobbying Frequency

At the community level, respondents in treatment villages were more likely to report lobbying efforts¹⁸ (from 3 to 17) while reports of lobbying efforts decreased in the control group (from 7 to 1). The increase in lobbying is important because district plans are the primary means through which local development priorities and budget allocations are made for localities. It is also a goal of the MSFs to make government officials and other authorities from the village to the district levels aware of community priorities and to incorporate them into official plans. Ideally, community consensus around an issue would be brought to the attention of these officials via a letter of request from the LC1 (the official government representative at the village level) through the sub-county and finally to the district.

Through MYJ's monitoring process, we are able to confirm many instances where communities took the information they learned at the MSF and formed action plans to influence decision-makers. Monitoring revealed that during the three-month period of measurement, 43 of 52 villages in the treatment group held oil sector meetings, post MSF, and those meetings generated consensus around 43 action plans.

For example, in some instances, treatment villages sent official letters about their priority concerns through their village leaders (LC1s) and there is evidence that such letters signed by village residents are moved to sub-county authorities for incorporation into official sub-county development plans. With time we expect those priorities to be adopted by district authorities in the district development plan.

There is also at least one example of a treatment village that set out to lobby for access to safe water as a village priority in its action plan. This priority was brought to the attention of sub-county authorities through a letter by the village chairperson and within a few weeks, the sub-county authorities had repaired the single borehole in that village.

¹⁸ By "lobbying" we mean writing letters of petition or meeting with decision-makers to make a particular request or demand.

7. Robustness Checks

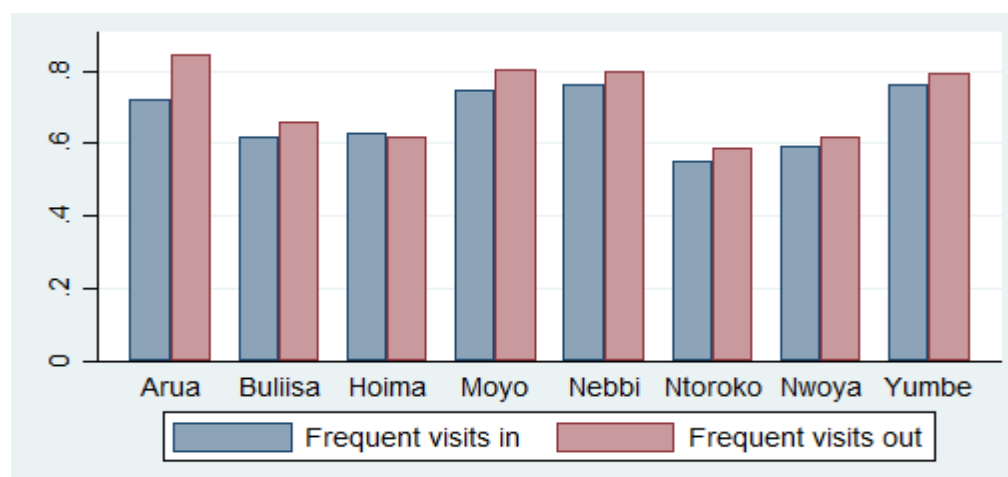
7.1 Spillovers: distance between villages

Interference between study units is an important threat to statistical inference. If assignment of the treatment to one village somehow influences outcomes in another village, then our estimates of the treatment effect are biased. To be certain our results above are trustworthy, we need to account for this threat of spillover effects.

A natural reason to expect spillover effects in this study is social interaction between respondents. Figure 7.1 shows the proportion of respondents in different districts indicating frequent (daily or weekly) visits in from other villages, or visits out to other villages. Because of the frequency of visits between villages, it is quite possible that study participants in one village interact with study participants in another.

Residents of a treatment village may discuss what they learn and accomplish through MSFs with friends or relatives in a nearby control village, in effect encouraging residents of that control village to take similar actions. Thus, civic activity in a control village could increase because they are close to a treatment village. On the other hand, seeing nearby villages receive benefits and resources through a MSF that one's own village does not spur feelings of frustration or jealousy that influence patterns of public opinion and decrease civic action.¹⁹ We are agnostic about the net impact of spillovers, and are mainly interested in ensuring that our results are robust to accounting for them.

Figure 30: Proportion indicating frequent visits with other villages



Gerber and Green (2012) provide a method for generating unbiased estimates of the treatment effect from randomized controlled trials in the presence of spillovers. Their approach requires a theoretical presumption about how spillovers are transmitted. In our case, we argue that distances between villages should proxy for the relative strength of potential spillovers. We presume that the severity of interference between units is primarily a function of how far each village is from at least one separate treatment village. Communication among residents of the study area is often face-to-face, and so

¹⁹ There is evidence from the qualitative data that such cross-village comparisons of benefits received from external actors like NGOs occur, and that there were residents of control villages in the study confused about why they did not receive the MSF treatment like other villages did.

respondents from one village are likely to interact most with respondents in other nearby villages.²⁰

Rather than attempting to divine the precise distance between villages that accounts for most regular social interaction, we show that our results are robust to presuming multiple arbitrary distances: treatment villages 1km, 3km, 5km, and 10km away. We first describe the estimation procedure below, and then overview the results that are found in a table in Appendix C.

Presume we are interested in spillovers for distances of 5km. First, we create a circle for each village, centered on the village. The edge of this circle shows every point exactly 5km away. In GIS parlance,²¹ this is called a buffer. We then determine whether there is a treatment village within that buffer,²² do this for every village, and assign a two-way categorization over the entire set of villages: *spillover vs no spillover*, and *treatment vs control*.

Second, the random selection of treatment and control villages was repeated 5000 times. We apply the categorization above to each of the simulated datasets, and record the number of times each village falls into each category. Third, we average over these 5000 simulated datasets, yielding an estimate of the probability each village would be a treatment village with spillovers, a treatment village with no spillovers, etc. Finally, we keep only the probability of the observed outcome; e.g., a control village facing a spillover in the true dataset keeps only the 5km probability weight that it would in fact be in the category *control-spill*. This process is repeated for buffers of 1km, 3km, and 10km. Summary data is Table 7.1.

These probabilities in hand, we modify our DID estimator to resemble the weighted difference-in-means estimator outlined in Gerber and Green (2012). To estimate the average treatment effect without bias, those authors exclude units that see spillovers. In the interest of not dropping important data, we elect to use the probabilities explained above in a weighted least squares estimation of our difference-in-differences model.²³

Table 7: Frequency of Nearby treatment villages within _____ km?

	Category			
	Treatment no spillovers	Treatment spillovers	Control no spillovers	Control spillovers
Within 10 km	5	49	5	49
Within 5 km	17	37	20	34
Within 3 km	44	10	38	16
Within 1 km	54	0	51	3

²⁰ Only 405 respondents in the baseline and 488 in the end line report someone in their household using social networking services like WhatsApp, Facebook, or Twitter. Thus, online communication is unlikely to lead to noteworthy spillover effects in this sample.

²¹ “Geographic information systems”

²² Distances were calculated in the R statistical environment using the `spDists()` function, written by R. Bivand and E. Pebesma (authors of Bivand et al., 2008). This function calculates distance in km using the “great circle” approach. Distances estimated this way are similar to distances calculated via QGIS software on a dataset of villages projected in UTM 36N (a projection with a base unit of meters that draws on the standard WGS84 projection).

²³ As noted previously, this model is given by: $y_{ijt} = \alpha + \beta Treat_{ijt} + \gamma Endline_{ijt} + \tau Treat_{ijt} \times Endline_{ijt} + \varepsilon_{ijt}$.

The first table in Appendix C compares the DID estimates when not accounting for spillovers to the estimates presuming spillovers are 1km, 3km, 5km, and 10km. All previously significant variables retain their statistical significance across buffers, and their magnitudes fluctuate little. In sum, we take this as evidence that the size of the effects documented in our main results represent a direct effect of the treatment, not an indirect effect biased by interference between units.

7.2 Spillovers: Interaction in Forums

As mentioned in our description of the treatment, representatives from some villages interacted with each other and shared experiences while participating in the MSFs. This arguably constitutes another spillover effect. Could our main results be driven somehow by social interaction that took place within these forums?

Treatment villages were brought into forums by district, as follows:

- Group 1: Buliisa, Ntoroko and Hoima
- Group 2: Arua, Moyo, Nebbi and Nwoya
- Group 3: Yumbe

To account for this, we create separate binary variables indicating whether each respondent is in a Group 1 or Group 2 village (Group 3 respondents are thus the residual category), and rerun our main analysis while accounting for those binary variables. A table in Appendix C shows the DID estimates based on this robustness check. They are not significantly different from our main results.

7.3 District Fixed Effects

Another potential concern is that the average treatment effects may be driven by a subset of districts. We thus replicated our analysis including district level fixed effects. The next table shows this result, comparing differences in treatment and control groups at baseline and end line as well as DID effects. These estimates are very similar to the treatment effects without controlling for district fixed effects and can be found in Appendix C.

7.4 Subcounty Fixed Effects

Similarly, unobserved differences between the 22 sub-counties in our dataset may also be skewing results. For example, some sub-counties may be hosts to refugee camps or be facing different degrees of exposure to the oil development process. Below we explore the inclusion of sub-county fixed effects. A table in Appendix C shows this result. Once again, these DID estimates are very similar to the main findings reported in Section 5.

7.5 Refugee Camps

Qualitative data indicate a noteworthy potential confounder that our study design did not consider: some refugees from the ongoing conflict in South Sudan are being housed in the Albertine Graben, and the number of these refugees has increased over the course

of our study.²⁴ Several respondents discuss improved access to social services with enumerators, which they attribute to the creation of nearby refugee camps. There is reason to wonder if our results are somehow influenced by household proximity to these camps.

The final table in the Appendix C assuages such concerns. The UNHCR was kind enough to provide us with geographic coordinates of all refugee camps in Uganda. Using QGIS software and a UTM 36N projection (a map projection with meters as its base unit), we calculated the distance between each household and the closest refugee camp. We then transformed this distance to kilometers, and reran our DID estimate while controlling for household proximity to the closest camp. Our results were not significantly altered.

8. Limitations

In this section we outline some of the study's limitations.

8.1 Short Time Period between Treatment and End line

The impacts that MYJ sought from its intervention are strategic and occur over the long term. In our initial proposal we planned on waiting one year between the treatment and end line. Realities on the ground, including donor requirements, and the tight schedule, imposed a much tighter period of just three months for the treatment to take effect. This is just too short a time for the strategic changes that MYJ is expecting to achieve through the MSFs. Yet, we have seen significant impacts on civic action in just three months. Given the current results we fully expect to see much more impact and more significant impact in an end line conducted one or two years from now, assuming that MYJ continues to receive funding to implement the MSFs.

8.2 Translation and Language Issues

Execution of the study (data collection, analysis, stakeholder engagement) required some consistency in meaning, yet the study area had 10 indigenous languages and limited use of English. The study protocol was developed in English, had to be translated for respondents in 10 different languages, and enumerators had to record responses back in English. It is possible that this limited may have had a negative impact on meaning. To mitigate this, the informed consent and study protocol were translated in advance and multi-lingual enumerators were hired.

8.3 Preparation of Treatment Village Representatives

MYJ typically invests a significant amount of time and resources to prepare MSF village representatives before their first engagement with other stakeholders. This preparation at minimum involves a clear understanding of their roles and responsibilities, identifying village priorities, and capacity building to effectively engage among themselves and with other stakeholder groups. Due to the accelerated project timeline and limited financial

²⁴ See: UNHCR (2017), "South Sudanese refugees in Uganda now exceed 1 million." <http://www.unhcr.org/en-us/news/stories/2017/8/59915f604/south-sudanese-refugees-uganda-exceed-1-million.html>

resources, this preparation did not occur in treatment village representatives. To mitigate this limitation, some time was set aside at the beginning of the MSF for preparation for the treatment village representatives.

8.4 Exposure to only one MSF

It is MYJ's experience that village action usually occurs after more than one MSF. Having only one MSF limited community action, facilitator mentoring, multi-directional accountability, and community uptake of information.

8.5 Exclusion of sub-county and district leaders in the MSF

Management of potential spill over effects necessitated the exclusion of local government leadership from the treatment. This resulted in a lost opportunity for village representatives to interact with their sub-county and district leaders to foster joint action and clarify attribution of responsibility.

9. Conclusion

9.1 Summary of quantitative findings

By our theory of change, providing opportunities for stakeholder engagement in addition to information provision in the control villages should contribute to the development of transparency. We understand transparency as not just access to information (our control treatment), but a culture that fosters the sharing and pursuit of information.

- Our difference-in-difference estimates above show that the MSF treatment: 1.) increased respondents' inclination to independently pursue information about oil development; 2.) caused respondents to be more trusting that key decision-makers will share information with the public; and 3.) encouraged respondents to see key decision-makers as more transparent.
- Although we did not see significant treatment effects on all related outcome measures,²⁵ we take our findings as general evidence that stakeholder engagement does help foster transparency.

Our theory of change further holds that these increases in transparency leave communities better able to use civic activities to address their oil development concerns and demand accountability from oil-sector decision-makers.

- We find evidence that this is the case as well. There are increases in reported civic activities at both the household and community level in treatment villages between the baseline and end line. The biggest change appears to be increases in the numbers of meetings with village leaders and other meetings related to oil-sector and social service provision issues.
- Those increases in civic activity also appear to coincide with increased satisfaction with the handling of issues respondents feel are important. This implies that not only are treatment respondents more likely to attempt to demand

²⁵ There were insignificant effects on a measure of actual oil-sector knowledge, respondent perceptions of their own awareness, and self-reported feelings of confidence in their ability to obtain information.

accountability, they also are (on average) more likely to feel that their demands are being heard.

Unfortunately, these increases in transparency and demands for accountability do not so far appear to have translated into meaningful change in policy outcomes.

- Measures of change in land management, social service provision, and local economic development do not appear to be significantly different in treatment and control villages in the end line survey.²⁶
- However, given the short period of time between the baseline and end line surveys, the lack of a significant effect is not very surprising. It may take many months or even a few years of mounting pressure for accountability demands to transform into tangible policy changes. It would be illuminating to observe future developments in treatment and control villages over time in regards to land tenure issues and the provision of various public services.
- Additionally, contrary to our prediction, respondents in treatment villages did not appear to concentrate their allocations of blame and credit across different important decision-makers as a result of the MSFs.²⁷

In sum, the type of stakeholder engagement employed in our study does appear to increase transparency, encourages more demands for accountability, and leads to increased satisfaction with the policy outcomes an individual cares most about. We cannot provide evidence of tangible policy changes in response to the increased accountability demands of treatment villages between the intervention and the end line survey, but it is possible that such changes could still accumulate over time.

9.2 Qualitative findings and other important takeaways

The qualitative portion of our study followed up on four impact areas that we will highlight here: land, satisfaction with different issue areas, and allocation of blame and attribution of credit to different oil-sector stakeholders.

Land:

- Ugandans in our study areas are deeply committed to their land. This commitment extends beyond any practical considerations, and is a core part of their identity. Any arrangements about land must take into consideration the fact that land means a great deal more than its market value to residents in the Albertine Graben.
- The importance of land does not change regardless of the influences of oil or refugee presence, both of which are perceived to increase economic development opportunities.
- While economic development and social services are important, consistently land is more important and links families inter-generationally.

²⁶ An exception is statistically significant increases in reported access to markets. It is important to be cautious when interpreting this finding, given the insignificance of the other outcome measures.

²⁷ When conducting MSFs unrelated to this study, MYJ notes that sub-county and district government figures tend to receive the most blame. These officials did not participate in the study MSFs, so it is unclear how this outcome would have changed in their presence.

Satisfaction:

- When respondents reported being most satisfied with land, this was typically tied to their perceptions of secure land tenure.
- Satisfaction with social service provision was typically based on respondent perceptions of their access to health and education services. Near refugee areas, social services set up for refugees were cited as being accessible to study communities. Refugee presence also enhanced economic development opportunities and access to goods.
- Respondents that were satisfied with economic development were primarily concerned with access to jobs and sources of income. However, land was the highest priority issue for most respondents.

Blame:

- Most end line respondents indicated in the qualitative data that they were allocating blame due to perceived neglect. In the baseline, blame was typically attributed to benefit gaps and perceptions of corruption. However, this difference may be largely the result of qualitative coding changes between baseline and end line. Substantively, many allegations of neglect in the end line data focus on unfair distribution of resources and a lack of responsiveness to local concerns.

Credit:

- In both baseline and end line surveys, most credit was attributed to different actors because of respondent perceptions of good leadership.

Gender Differences

Men and women responded similarly to the MSFs on most quantitative and qualitative outcome measures above. This could mean that the MSFs do not have a significantly different effect on transparency and accountability when comparing men and women in this context. We believe, based on initial monitoring reports of participation, that MYJ's insistence on female representation and the presence of many females in the MSFs enables women's input and inclusion in priority setting and planning. Whether these results can be sustained will require follow up at a later point.

Notably this does not imply that gender inequalities themselves were absent in the study areas, and such inequalities (especially their impacts on the relative ability of men and women to demand accountability in regards to their differing political interests) are indeed worth exploring in future research. It could also be that a more gendered design *would* find significantly different treatment effects by gender. A true gender analysis requires addressing practical and strategic gender needs and interests, and exploring the gender division of labor and intra-household decision making. This is difficult to accomplish in a RCT type study where the unit of analysis is the household.

9.3 Unanswered Questions

Methodological issues and questions about how to best combine qualitative data with a RCT study are worth pursuing more thoroughly in the future. Similarly, a design that incorporates gender analysis in an RCT framework would be challenging, but relevant and worthwhile in the context of a different study question.

9.4 Next steps

- A more gendered study, that prioritizes gender rather than the RCT model in its design, while still being rigorous, to determine whether there really is gender equality in civic participation in the Albertine Graben.
- More comprehensive and complete analysis of the qualitative data.
- Fundraising for additional treatments and end line surveys to assess impacts of the MSFs over time.
- Funding to enable MYJ to continue the MSFs, at least until they can be properly evaluated. Their potential impact is significant, but will never be known without a proper end line and a long-term view, with right timing. Much of DFID and Hewlett's significant investment in the current project will be wasted if we do not follow up with a proper end line at the right time.

We are excited and motivated by the strong results given this very short timeline between the treatment and end line. We strongly recommend another survey after at least one year, a more realistic time line when we can expect to see the results of this initiative. BCS, which envisioned this project, largely based on MYJ's interest in truly learning about the impact of its work, and subjecting its work to external scrutiny, and our quantitative specialists at FSU, are all interested in finding out whether the significant results we have seen in such a short period can be sustained, and what additional impacts we will see. Our expectation is that the changes occurring from MYJ's MSFs are significant and worth documenting for their potential internationally and for policy challenges within Uganda.

We believe some of the early compromises we made on time enriched the study substantially and built the capacities of all three PIs (and our teams) to carry out mixed methods research projects in the future. However, additional delays caused by circumstances beyond our control (reduction in oil prices, changes in operating companies, national elections) imposed further time challenges.

10. Recommendations

10.1 Government

The Government of Uganda should commit to, and implement, the Extractive Industries Transparency Initiative (EITI), which is a voluntary global standard for disclosing company payments and government revenues, in collaboration with other stakeholder groups such as private sector, academia and civil society. We argue that a culture of transparency is necessary for communities to feel they can effectively demand accountability from extractive companies and their local and national leaders. Moreover, we provide evidence that increases in transparency can be associated with increased local trust in key decision-makers. This implies that the government can generate further local support for the oil development process by fostering public perception of its transparency.

The Government of Uganda should also begin engagement and discussion of how land management will happen so there is transparency and consistency across ethnic and other social divides. We recommend that the IFC Performance Standards on

Environmental and Social Sustainability (Standard 5 on Land Acquisition and Resettlement) be applied, or serve as the basis for developing a comprehensive national policy that is fair and transparent to land-owners and their expressed ties to land. This recommendation is based on our analysis of qualitative data, in which allegations of “neglect” emphasized unequitable distribution of resources across villages or social groups, and a general lack of responsiveness.

Similarly, local government leaders need to be more actively engaged with communities, companies and the central government on matters related to petroleum exploration and development. Local leaders have a responsibility to prepare the community for the impacts and opportunities that the petroleum sector brings, and clarify to communities their rights, roles and responsibilities in the sector. Part of this entails building district development plans around the policy priorities of local villagers. Our study provides clear evidence that the opportunity to express their preferences through face-to-face contact with government figures during the stakeholder engagement forums led villagers to feel more satisfied with the management of different policy issues.

10.2 Communities

Communities/villages should actively demand peaceful and open engagement with companies and local and national leaders. Moreover, communities should seek opportunities for face-to-face contact with important decision-makers, and engage in more extensive discussion about oil development with other villages. Our research provides evidence that active engagement facilitates a deeper pursuit of information on the part of local community members, leads to a rise in other kinds of civic activity, and results in communities feeling more satisfied with important social issues. We also believe active engagement will help communities in the study area receive more benefits from the oil development further in the future, although we cannot bring evidence from our study to bear on this point.

10.3 Companies

Often, substantive engagement between companies and villages does not begin until the extractive industries projects cycle is well underway. Uganda is in a different situation, where engagement and education efforts began occurring early on. All the same, data generated by our study and the experiences of MYJ provide reason to believe these efforts may not have been sufficient; available information about oil development is low in some villages, and fears of land theft still persist in some cases.

Companies should engage with communities prior to commencing exploration activities in order to better understand community needs and expectations. Companies need to develop strategies in cooperation with government and civil society on early stakeholder engagement processes in order to lay the foundations for mutual respect and trust (Eftimie et al., 2013). Our study provides evidence that stakeholder engagement has that exact result. This point is particularly important in the Albertine Graben where villages across the region are experiencing various stages of the project cycle. Villages inevitably interact with each other, and resentment can build if local engagement exists at all but is uneven across the region.

10.4 NGOs, civil society groups, and other organizations

Our data suggests that the primary concerns of most respondents in the study area are land (for its connection to their cultural identity and utilitarian value), sources of jobs and income, and the provision of better education and healthcare services. When respondents expressed resentment for various actors in the end line survey, it was often tied to accusations of neglect: respondents assigned blame to decision-makers that they felt distributed benefits and public services unevenly and did not fulfil commitments they made to local communities. Organizations wishing to support communities in the study area as they demand accountability during the oil-development process should bear in mind that these are the most salient issues and challenges communities hope to confront.

NGOs, civil society groups and other organizations should use this research to carry out evidence-based stakeholder engagement interventions that help communities manage their expectations, reduce the risks and enhance the benefits of development projects, and clarify attributions of responsibility among members of the public. Our research design provides evidence that such strategies support a community's ability to demand accountability and a better representation of their interests in development projects.

Organizations that fall into this category are the actors that should support the sustainability of stakeholder engagement initiatives. Civil society groups and other kinds of public interest organizations— such as MYJ— are a natural choice to organize face-to-face discussion and action planning among local citizens, government officials, and companies, all of whom have different and at times competing interests in the outcome of extractive development projects. Those CSOs that have no predetermined agenda or priority are best positioned to facilitate such forums to ensure there is no bias on the part of the facilitator about which priorities the communities pursue.

10.5 Researchers and donors

Our findings suggest that more research attention needs to be devoted to linking demands for accountability to changes in public spending and public services over different timeframes. Additionally, the diverse pattern of significance we see across our many measures of a culture of transparency indicates that the very concept is worth more careful unpacking. Many researchers oversimplify as a simple transmission of information what is really a complex concept with many moving parts.

Additionally, researchers need to take into consideration the real-world risks of implementing agencies when they agree to participate in such studies. Researchers should share methodology, methods, data, types of analysis, and other capacities so the field team and participants in the study can understand what is being studied, why, what the results are and what they mean. There are time and cost implications associated with this.

Both researchers and donors should recognize that the bulk of time required for analysis of qualitative data is after the data are collected. The opposite is true for the quantitative. Coding of qualitative data is time consuming and cannot be reliably computerized. For example, each qualitative question in this study required that 3200 responses be coded manually.

Finally, donors should consider expanding their categories of funding to incorporate innovations like the MSFs. They should build in funding support for baselines and data collection for ease of monitoring and evaluation. Donors need flexibility when a study, like this one, occurs in the context of unforeseeable factors that may impact on the study.

Online appendixes

Online appendix A: Coding of Qualitative Data

Online appendix B: Balance Figures from Baseline

Online appendix C: Tables of Robustness checks

Online appendix D: Descriptive Figures for Outcomes of Interest

Online appendix E: End line Household Survey

Online appendix F: Information Packet

Online appendix G: Map of Sampled Communities

Online appendix H: Treatment Effects by Gender

References

- Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of public administration research and theory*, 18(4), 543-571.
- Arezki, R., & Brückner, M. (2011). Oil rents, corruption, and state stability: Evidence from panel data regressions. *European Economic Review*, 55(7), 955-963.
- Balla, S. J., & Gormley Jr, W. T. (2017). *Bureaucracy and democracy: Accountability and performance*. CQ Press.
- Bivand, R. S., Pebesma, E. J., Gomez-Rubio, V., & Pebesma, E. J. (2008). *Applied spatial data analysis with R* (Vol. 747248717). New York: Springer.
- Carlson, E. (2015). Ethnic voting and accountability in Africa: A choice experiment in Uganda. *World Politics*, 67(2), 353-385.
- Donahue, J. (2004). *On collaborative governance*. Cambridge: John F. Kennedy School of Government, Harvard University.
- Eftimie, A., Darling, R., Pollett, T., Taval, P. (2013). *A Strategic Approach to Early Stakeholder Engagement: Good Practice Handbook for Junior Companies in the Extractive Industries*. Washington, DC: International Finance Corporation. Available from: <http://commdev.org/userfiles/ESSE%20Handbook%20June%2018final.pdf>.
- Franks, D. M., Davis, R., Bebbington, A. J., Ali, S. H., Kemp, D., & Scurrah, M. (2014). Conflict translates environmental and social risk into business costs. *Proceedings of the National Academy of Sciences*, 111(21), 7576-7581.
- Frey, B. S., & Meier, S. (2004). Social comparisons and pro-social behavior: Testing "conditional cooperation" in a field experiment. *The American Economic Review*, 94(5), 1717-1722.
- Gerber, A. S., & Green, D. P. (2012). *Field experiments: Design, analysis, and interpretation*. WW Norton.
- Gomez, B. T., & Wilson, J. M. (2006). Cognitive heterogeneity and economic voting: A comparative analysis of four democratic electorates. *American Journal of Political Science*, 50(1), 127-145.
- Henisz, W. J., Dorobantu, S., & Nartey, L. J. (2014). Spinning gold: The financial returns to stakeholder engagement. *Strategic Management Journal*, 35(12), 1727-1748.
- IFC. (2007). *Stakeholder Engagement: A good practice handbook for companies doing business in emerging markets*. Washington, DC: International Finance Corporation. Available from: http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_stakeholderengagement__wci__1319577185063
- Jamali, D., & Karam, C. (2016). Corporate social responsibility in developing countries as an emerging field of study. *International Journal of Management Reviews*.

- Kolstad, I., & Søreide, T. (2009). Corruption in natural resource management: Implications for policy makers. *Resources Policy*, 34(4), 214-226.
- Kolstad, I., & Wiig, A. (2009). Is transparency the key to reducing corruption in resource-rich \ countries? *World development*, 37(3), 521-532.
- Kwoka Jr, J. E. (1985). The Herfindahl index in theory and practice. *Antitrust Bull.*, 30, 915.
- Lubell, M. (2004a). Collaborative environmental institutions: All talk and no action?. *Journal of policy analysis and management*, 23(3), 549-573.
- Lubell, M. (2004b). Resolving conflict and building cooperation in the National Estuary Program. *Environmental management*, 33(5), 677-691.
- Manyindo, J., Van Alstine, J., AmanigaRuhanga, I., Mukuru, E., Smith, L., Nantongo, C., Dyer, J. 2014. The Governance of Hydrocarbons in Uganda: Creating Opportunities for Multi-Stakeholder Engagement. Maendeleo ya Jamii, Kampala, Uganda. Available from: <http://www.maendeleoyajamii.org/wp-content/uploads/2015/06/The-Governance-of-Hydrocarbons-in-Uganda-Creating-Opportunities-for-Multi-Stakeholder-Engagement-August-2014-CCA-Report.pdf>
- Mewhirter, J., Coleman, E. A., & Berardo, R. Forthcoming. Participation and Political Influence in Complex Governance Systems. *Policy Studies Journal*.
- Ministry of Energy and Mineral Development. (2016). *Politics and Legal Framework in Extractive Industries to Ensure Sustainable Growth: Uganda's Experience in Oil and Gas*. Kampala, Uganda. [Powerpoint presentation, delivered in Mombasa, Kenya]. Available from: http://www.wgei.org/wp-content/uploads/2016/08/Presentation-2-Policies-and-Legal-Framework-in-EI-Ernest_Uganda.pdf.
- Ministry of Energy and Mineral Development. (2017). *Progress of Implementation of the National Oil and Gas Policy for Uganda*. Kampala, Uganda. Available from: http://petroleum.go.ug/uploads/resources/Status_of_Policy_2017_dl.pdf.
- Ostrom, E. (2015). *Governing the commons*. Cambridge university press.
- Ostrom, E., Gardner, R., & Walker, J. (1994). *Rules, games, and common-pool resources*. University of Michigan Press.
- Przeworski, A., Stokes, S. C., & Manin, B. (Eds.). (1999). *Democracy, accountability, and representation* (Vol. 2). Cambridge University Press.
- Rhoades, S. A. (1993). The herfindahl-hirschman index. *Fed. Res. Bull.*, 79, 188.
- World Bank (2015). Uganda Country Economic Memorandum: Economic Diversification and Growth in an Era of Oil and Volatility.