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“You need to have this information!”: Using videos to increase demand for accountability on public revenue management

Christa Brunnschweiler ^{a,*}, Ishmael Edjekumhene ^b, Päivi Lujala ^c, Sabrina Scherzer ^d

^a Department of Economics, Norwegian University of Science and Technology (NTNU), 7491 Trondheim, Norway & CESifo

^b Kumasi Institute of Technology, Energy and Environment (KITE), P. O. Box AT 720, Achimota Market, Ghana

^c Geography Research Unit, B.O. Box 8000, 90014 University of Oulu, Finland

^d Department of Geography, Norwegian University of Science and Technology (NTNU), 7491 Trondheim, Norway



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ABSTRACT

How can citizens be motivated to demand accountability in the management of public revenues? We carry out a video survey experiment among 2300 Ghanaian respondents to study the impact of information provision and encouragement messages by a politician and a civil society leader on attitudes and demand for accountability in the management of petroleum revenues. We find that providing information significantly increases knowledge about current revenue management, satisfaction with the way revenues are handled and spent, and the intention to demand more accountability. The encouragement messages have an additional effect: they increase the sense that citizens can influence how petroleum revenues are used and the intention to contact media to ensure better accountability. However, a follow-up survey two years later shows that these impacts do not last. The experiment suggests that providing relevant information affects attitudes and intended behavior in the short term and that role models can give valuable encouragement for behavioral change, but this is not enough to influence engagement with revenue management in the longer term.

1. Introduction

Accountability is seen as a cornerstone of government effectiveness. However, citizens require low barriers to citizen engagement to make their voice heard and to hold decisionmakers accountable (Hirschman, 1970). One such barrier can be the poor availability of relevant and timely information (Fung et al., 2007; Kosack and Fung, 2014). In the extractive industries, for example, the international community has pushed for transparent information provision to reduce resource revenue mismanagement and increase accountability of government to its citizens.¹ Around 3.5 billion people live in countries rich in oil, gas or minerals, but poverty and corruption remain a big challenge in many of these countries.² The idea behind transparency in this context is that citizens can use information on the management of valuable natural resources and their public revenues to form their views, contribute to

debates on natural resource governance and, if necessary, voice their concerns and demand greater accountability of the involved parties, e. g., through changing voting behavior in democratic elections or lobbying against corruption and other mismanagement in public expenditure.³

A problem is that there is still little evidence that information disclosure increases demand for accountability in natural resource revenue management, reduces corruption, or improves government effectiveness (Kolstad and Wiig 2009; Rustad et al. 2017; Lujala 2018). Much of the empirical research on transparency in natural resource governance has focused either on the process of the information disclosure itself, or on the linkages between a transparency initiative and the levels of corruption and development in a country. Little research has been devoted to the intermediate steps connecting public information provision to the final outcomes of governance and development: from the

* Corresponding author.

E-mail address: christa.brunnschweiler@ntnu.no (C. Brunnschweiler).

¹ See e.g. Haufler (2010), David-Barrett and Okamura (2016), Kasekende et al. (2016), and Le Billon et al. (2021).

² Many resource-rich countries have seen relatively slow economic growth, high corruption levels and weak institutions, and increased probability of conflict (see e.g. van der Ploeg 2011 and van der Ploeg and Poelhekke 2017 for surveys of the literature on the resource curse).

³ For the theory on transparency and accountability in the extractive sector, see e.g. Le Billon et al. (2021).

information uptake by citizens to their subsequent attitudes and demand for accountability, and how these steps could be eased.⁴

In this paper, we investigate whether providing citizens with easily understandable and relevant information on public revenue management changes attitudes and demand for accountability, and we take inspiration from the growing role model literature to see whether encouragement to make use of citizen rights and take action to demand accountability from a well-known politician and a civil society leader has any additional impact on attitudes and behavior.⁵

We focus on the management of petroleum revenues in Ghana, a relatively recent petroleum producer in West Africa with a strong transparency policy in place. We implement a large randomized survey experiment using three different videos. The first video contains information on oil and gas revenue management and region-specific expenditure. The second has the same information plus two encouragement statements – one from a well-known politician, the other from a civil society leader – that explain why this information is important, how citizens can use it, and why citizens should demand accountability in petroleum revenue governance. The third is a placebo video with general information on Ghana. The main survey was conducted in-person in late summer 2017 with over 2300 respondents in 120 districts across the country. A short telephone follow-up survey in early 2020 explores long-term effects among over 920 respondents from the original survey sample.

Our experiment provides four standout results: first, providing easily understandable visual information on petroleum revenue management with regional relevance significantly improves treated respondents' satisfaction levels with how revenues are managed in Ghana, and with the development projects funded by these revenues in their region. While our control group is on average dissatisfied on both counts, our treated subjects become satisfied. Second, providing information increases respondents' intention to demand more accountability through greater debate and contacting the official petroleum revenue watchdog. Third, our encouragement message had additional effects: it increased the sense that citizens can influence how petroleum revenues are used and the intention to contact the media in order to improve petroleum revenue management. Our fourth result adds a note of caution: the follow-up survey two years later showed that the effects did not persist, and that good intentions did not translate into noticeable differences in actions undertaken even among those who had stated their intention to act in the main survey.

Our findings suggest that future policy should simplify and localize information on how public revenues are being managed, and that the use of additional encouragement and motivation to act, e.g., by role models, could be a relatively low-cost complementary policy to encourage citizens to engage with resource revenue management. However, more research needs to be done to determine how long the effects of one-off information interventions last, and whether repeated interventions would be able to maintain the short-term positive stated-intention outcomes and translate these into longer-term behavioral change.

In Ghana, like in many resource-rich developing countries, natural resources are a vital source of public revenue. Ghana is a major gold producer, and in 2007 it discovered offshore oil and gas in the Gulf of

⁴ Two recent contributions look at information channels and attitudes towards natural resource revenue management in Ghana (Lujala et al. 2020; Brunnschweiler et al. 2021).

⁵ See Haaland et al. (2023) for a valuable survey on information treatments in experiments. The term 'role model' was first used by Merton (1957). The theoretical framework in Morgenroth et al. (2015: 466) ascribes three possible functions to role models: (a) acting as behavioral models, (b) representing the possible, and (c) being inspirational. Our approach most closely reflects the first function, i.e. our two personalities share information that allows respondents to model their behavior (see Section 3.2 below).

Guinea. Production began in 2010, and in 2018, the export of petroleum and minerals together accounted for 67 percent of Ghana's merchandized export revenues and 16 percent of its GDP (GHEITI 2019). The government of Ghana has taken several steps to bring transparency, accountability, and citizen participation into its natural resource governance, for which it has been widely lauded by the international community. It joined the Extractive Industries Transparency Initiative (EITI) – a global initiative to increase transparency within the industry – in 2003, and enacted the Petroleum Revenue Management Act (PRMA) in 2011. The PRMA emphasizes responsible, transparent, and accountable revenue management, and set up the Public Interest and Accountability Committee (PIAC) as the independent revenue watchdog that is tasked with ensuring compliance with the PRMA.

Amongst PIAC's tasks are the publication on its website and presentation before parliament and citizens of two reports per year,⁶ the publication of a summary of its findings in two national newspapers, and the creation of opportunities for public engagement with the management and utilization of petroleum revenues and involvement of communities hosting extraction and production activities in decisions on how natural resource revenues are spent locally (Dupuy, 2014; Lujala et al. 2020). The PRMA also mandated that a set annual amount of petroleum revenues, approved by the Ghanaian Parliament, is allocated to the Annual Budget Funding Amount (ABFA) for the implementation of development projects throughout the country.⁷ At the time of our fieldwork, a maximum of 70 percent of petroleum revenues could be allocated to the ABFA (PIAC 2017), and ABFA funds had already been disbursed for projects in all regions of Ghana.

Despite the implementation of these strong transparency and accountability measures, a survey conducted in 2016 showed that Ghanaians were dissatisfied with how natural resource revenues were managed in the country, had limited access to relevant information regarding the extractives sector, and had rarely engaged in voicing their concerns about the sector and how its revenues were used (Lujala et al. 2020; Brunnschweiler et al. 2021). While PIAC reports are easily available on the Committee's website, they generally run to over 100 pages of extensive and often technical national-level information with limited direct value for ordinary citizens. Edjekumhene et al. (2018) explore ways in which PIAC can improve both its public information dissemination strategy and its citizen engagement efforts: they recommend more decentralized information events and using information technology to build a cost-effective virtual information and citizen voice platform. We build on these results and examine specifically how increased personal relevance through easily understandable region-specific information and the use of potential role models to encourage individual engagement affect attitudes and demand for accountability.

Our paper contributes to the large literature on transparency, accountability, and government effectiveness, pioneered by Hirschman (1970) who analyzed the options – 'voice' or 'exit' – available to consumers who are dissatisfied with the quality of a good, and to citizens who are dissatisfied with their government. More recently, Besley and Burgess (2002) looked at public information and government responsiveness theoretically and empirically and concluded that state governments are more responsive in places with better information. Reinikka and Svensson (2011) find corruption-reducing effects of public information on the local handling of education funding in Uganda. Armand et al. (2020) show that a community-based information campaign in Mozambique relating to natural gas discovery was effective

⁶ One half-year and one annual report, freely available on <https://www.piacghana.org>.

⁷ In addition to the ABFA, the PRMA also allocates petroleum revenues to the national oil company (Ghana National Petroleum Corporation GNPC), the Heritage Fund and the Stabilisation Fund. For more information on Ghana's petroleum revenue management framework, see e.g., Ogbe and Lujala (2021), Stephens (2019) and Graham et al. (2019).

in raising awareness and knowledge of citizens; that information given instead only to leaders increased elite capture and rent-seeking; and that providing the general population with information and the opportunity for deliberation increased mobilization, trust and voice, and decreased violence. De la Cuesta et al. (2022) use a series of lab-in-the-field experiments in Uganda and Ghana to show that messages on citizen ownership of petroleum revenues can positively affect measures of demand for accountability, which complements our findings on encouragement messages' impact on citizen rights beliefs. However, a meta-analysis by Fox (2015) shows limited impact of information provision on general public sector performance.

The EITI applies the theory of transparency to the extractives sector, but evidence on its effect on the final outcomes of government effectiveness and corruption reduction is mixed: for example, Kasekende et al. (2016) and Rustad et al. (2017) find little impact, while Fenton Villar (2021) shows improved corruption scores. We provide micro-level experimental evidence on how targeted and easily understandable information based on existing transparency reports can affect citizens' satisfaction with public revenue use and their intention to use the 'voice' option and demand accountability.

The present study is also linked to the rapidly growing literature on the use of role models to provide inspiration and encouragement for behavioral change. Early contributions tended to focus on the political sphere and the influence of female politicians (e.g., Campbell & Wolbrecht 2006; Ladam et al. 2018). Experimental economists have looked at the influence of leaders seen as role models on, for example, tax morale (Luttmer and Singhal 2014), ethical behavior (D'Adda et al. 2017), and a public bad investment that mimics environmental behavior (Moxnes and van der Heijden 2003). Gächter and Renner (2018) show that leaders function as role models and 'belief managers' in a public goods game. In development economics, the idea has inspired several studies into the use of role models in mass media, such as film and television, to deliver messages to change gender-related behaviors (e.g., Jensen and Oster 2009, Chong and La Ferrara 2009, La Ferrara et al. 2017), combat various aspects of poverty-related behaviors (e.g., La Ferrara 2017), improve education outcomes (Riley forthcoming), and reduce corruption (Blair et al. 2019).⁸ Bernard et al. (2015) propose that video interventions with targeted information and relatable role models can be used successfully in small-scale video treatments to try to bring about behavioral change in poor countries, and discuss one application to encourage future-oriented behavior in rural Ethiopia. We experimentally test the use of encouragement and motivation by a political and a civil society leader in videos to bring about improved accountability in natural resource revenue management, which to our knowledge is the first time this has been tried in this context.

The rest of the paper is structured as follows. Section 2 provides a brief theoretical background; Section 3 describes our experimental design and empirical methodology; Section 4 discusses our results; and Section 5 concludes.

2. Transparency and demand for accountability

Transparency, i.e. the provision of timely and reliable information to relevant stakeholders (Bellver and Kaufman 2005), aims at reducing one of the barriers to accountability identified by Hirschman (1970). Transparency has some intrinsic value, but the concept has become popular largely because of its instrumental value as a means to an end "because it promotes democracy, trust in public institutions, or market efficiency" (Buijze 2013).

Transparency can promote better governance via different channels. Le Billon et al. (2021) develop a theory of transparency for natural resource and environmental governance and propose three stylized

models for how a transparency agenda can achieve its governance and development goals: (1) name-and-shame; (2) public debate; and (3) technical reform. In this framework, our paper contributes to model (2) of transparency in which public information provision and citizen action play crucial roles in keeping leaders accountable.

Transparency through the public debate channel is further elaborated in Fung et al. (2007) and Kosack and Fung's (2014) transparency action cycle. It describes (1) state institutions' provision of salient and accessible information to citizens about practices and policies; (2) citizens receiving and (3) acting on the information, seeking to influence the state; (4) the state institutions finding the citizen action and feedback salient; (5) state institutions responding constructively through changing practices and policies; and finally (6) the state providing updated information to the public about the changes it has made to practices and policies for further evaluation. In this paper, we focus on phase (3) of this cycle.⁹

The importance of information for behavioral outcomes is based on standard economic assumptions of rational choice theory. We focus on three aspects of the information-behavior link: the ease of understanding and the personal relevance of the information; and the use of messages to encourage and motivate behavioral change. The first two aspects are addressed by designing simple informational videos with details on regional rather than national revenue management (the latter being the standard focus of resource revenue transparency reports in Ghana and elsewhere). The third aspect is covered by the use of two 'role models' who deliver complementary messages (see below for details).

Our basic hypotheses are that providing easily understandable and region-specific information on Ghana's management of petroleum revenues will have an effect on personal satisfaction with how resource revenues are handled. The effect is likely to be positive on average given the overall low levels of citizen information on the topic and the encouraging fact that revenues have been spent throughout the country, but could be negative if respondents are disappointed by the content of the information provided. The direction of the effect on satisfaction levels is therefore ambiguous *ex ante*. We expect a positive effect of the information treatment on the sense that citizens can influence how revenues are handled; and increased (intention to take) action to make use of citizens' voice option. The encouragement messages by our 'role models' are aimed primarily at giving citizens additional reasons to become more engaged in revenue management by appealing to their sense of citizen ownership of resource revenues and their rights to demand accountability. We therefore expect the encouragement treatment to particularly affect respondents' sense of citizen influence and their intended actions. We will test for statistical differences between the two treatments to understand whether and when the use of 'role models' does indeed have an additional impact to the pure information treatment.

3. Research design and empirical methodology

3.1. Sampling and experimental design

We analyse data from a survey experiment conducted in July-August 2017 that was part of the endline survey of a field experiment (or randomized control trial, RCT). The field experiment evaluated the impact of PIAC's transparency and accountability efforts, targeting both local leaders and citizens. Between the baseline conducted in June-August 2016 and the endline survey, PIAC ran two externally funded interventions in a 2x2 factorial design with a control group. The treatments consisted of community information meetings held by PIAC with

⁸ See Della Vigna and La Ferrara (2015) for an overview of the economic and social impacts of mass media.

⁹ Harris et al. (2020) use a conjoint experiment to show that bureaucrats in Ghana, Malawi and Uganda expect public sector programs with stronger transparency and accountability measures to be more successful, which is related to phase (5) of the transparency action cycle.

invited participants from local politicians and other opinion leaders such as journalists; an SMS-based series of messages to a broader segment of citizens; and a combination of the two.¹⁰ The unit for treatment in the RCT was the district. A telephone follow-up survey was conducted in February-March 2020.

The field experiment was conducted in 120 out of 216 districts throughout Ghana and the endline sample consists of 2363 adult (18 years and over) respondents who all participated in the field experiment baseline. In the endline survey, respondents were interviewed face-to-face by Ghanaian enumerators in English (30 %; the official language), Twi (54 %) or Ewe (3 %).¹¹ All participants from the endline survey were followed up by telephone in early 2020, and 925 respondents were interviewed, with similar language shares (see below for more details).

For inclusion in the field experiment, a combination of blocking and clustering was used. All six oil and 25 mining districts¹² were included, while the remaining 89 districts were selected randomly among

remaining districts with probability proportional to population size. The districts included in the experiment are shown in the map in Figure 1. Treatment assignment for the field experiment was block-randomized to ensure balanced representation of oil and mining districts in each treatment arm.

In each district, five electoral areas were randomly selected using the Electoral Commission's list of electoral areas as the sample frame. One District Assembly (DA) member per electoral area was randomly selected from a list obtained from the district administration. The selected DA member was contacted and an appointment made to meet in their electoral area. Each DA was asked to suggest one member of a Unit Committee (UC; the lowest administrative level in Ghana); one Chief or other member of the traditional authority such as a Queen Mother; and one other opinion leader (for example, a journalist or teacher) in their electoral area. The non-random selection of these duty bearers was chosen as there are no reliable lists available. Lastly, two ordinary citizens (1 male and 1 female) were randomly selected in each electoral area.¹³ The baseline sampling structure therefore targeted 30 respondents per selected district, with an average of 20 respondents per district included in the endline survey and survey experiment.¹⁴ Due to limited involvement of women in local and national politics in Ghana, women are underrepresented among the duty bearers, but they make up 46 % of the common citizen sample.¹⁵

The survey experiment was the final part of the endline survey. The preceding field experiment endline survey included blocks of questions on the respondent's household and background; on knowledge and information sources about natural resource revenue management¹⁶; on the respondent's satisfaction with how resource revenues are handled in Ghana and the respondent's home area; on the respondent's beliefs about citizens' opportunities to influence revenue management locally and nationally; and on the respondent's plans for future action to influence resource revenue management. DA and UC members, as well as traditional leaders, were also asked questions about their discussion of natural resource revenue management with their peers, other local leaders, and ordinary community members. There was thus a fair amount of priming on issues related to the extractive industry, which is likely to (temporarily) inflate their importance among respondents. This priming, however, was equal across all respondents. In our analysis below, we focus on the sign and significance of our survey treatment effects, rather than their magnitude.

3.2. Treatments

In the survey experiment, three different videos were randomly assigned to respondents across all three treatment arms of the original field experiment. Randomization was done at the individual level by simple random pick, meaning that the survey randomization is

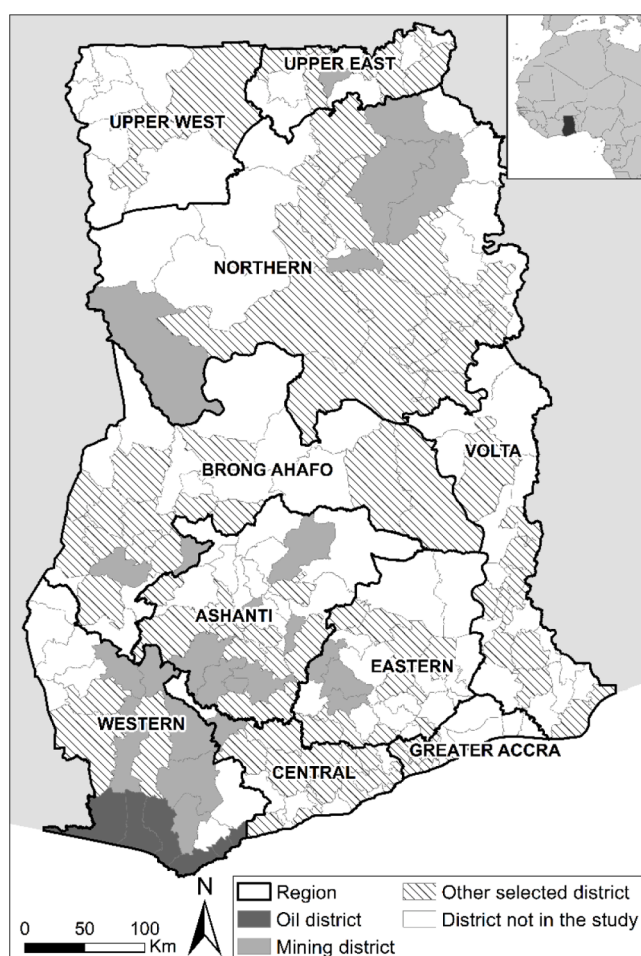


Figure 1. Map of Ghana showing survey districts (all shaded). Note: Districts and regions are shown as of 2016.

¹⁰ See Edjekumhene et al. (2018) for details on the underlying field experiment. Controlling for treatment status in the underlying field experiment does not affect our results, see below.

¹¹ In 12% of cases, an interpreter was used to conduct the survey in another of Ghana's languages.

¹² The list of mining districts was obtained from the Ghana Minerals Commission.

¹³ Two enumerators first agreed on who would interview a male and female respondent, alternating respondent gender across electoral areas. Then the two enumerators each went 100 steps in opposite directions from the spot where they met the DA and interviewed the closest person of the selected gender willing to participate in the survey.

¹⁴ The most difficult to reach were the traditional leaders. When a representative for the traditional authority could not be interviewed, an additional opinion leader was identified instead.

¹⁵ The underlying sampling method means that the district selection is geographically representative of the country as a whole. Duty bearers were deliberately oversampled, implying that results for the whole sample are not representative of the Ghanaian population. See Lujala et al. (2020) and Brunnschweiler et al. (2021) for more details on the baseline survey.

¹⁶ To gauge the respondent's level of knowledge, she was asked questions about the PRMA, GHEITI, PIAC, and the ABFA.

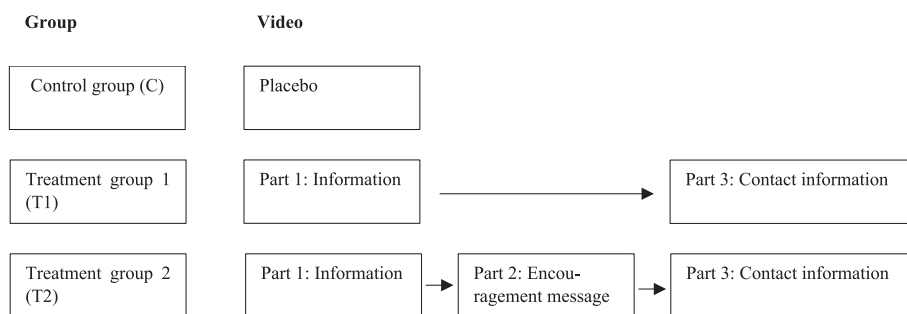


Figure 2. Video design. Transcripts of all three videos (English version) can be found in Appendix B.

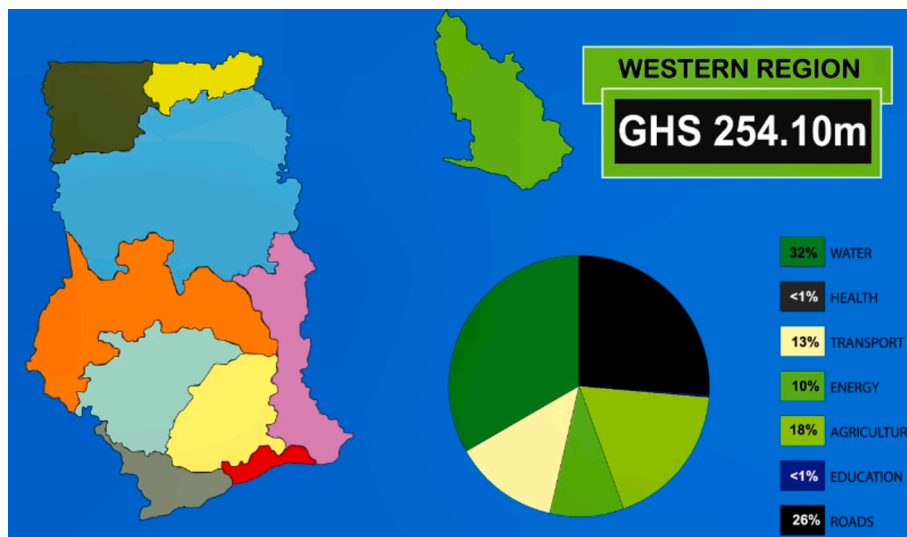


Figure 3. Treatment video excerpt: ABFA spending in Western Region.

independent of the randomization of the underlying RCT.¹⁷ This resulted in 636 respondents in the control group (C), 944 in the treatment video 1 group (T1), and 783 in the treatment video 2 group (T2). The videos were shown to the respondent on the tablet used for survey data collection with selection of voiceover in English, Twi, or Ewe. All videos were followed by a short survey with our main questions of interest (see Section 4), which concluded the whole endline survey. Both the survey and videos were piloted before the survey experiment started.

All videos were factual and consisted of a voiceover and slideshow with animations to illustrate the voiceover.¹⁸ We had two treatment videos and one placebo video for the control group. The design of the three videos – Placebo, T1 and T2 – is shown in Figure 2. The two-minute placebo video presents basic information about Ghana, its administrative set-up, demography (population ratio, median age, birth and death rate), and ethnic, linguistic, and religious composition.

The first treatment video gives information on oil and gas production and revenue management. The video was designed to be neutral in tone and language. It introduces the oil producing areas, production volume and value for the period 2010–2016, and the amount of revenues received by the government of Ghana. The video then explains how the

revenues are shared between the Stabilization Fund, Heritage Fund, ABFA, and the Ghana National Petroleum Corporation; how the revenues going to the ABFA have been spent; how much ABFA funding each of the ten regions has received; and on what type of projects ABFA funding has been spent in each region. Figure 3 shows a sample slide on ABFA revenue distribution to one of Ghana’s regions. The final slide provided sources for more information, including the respondent’s member of parliament and PIAC. In total, the first treatment video is around five minutes long.

The second treatment video consists of the first treatment video and two messages from our ‘role models’, an elected politician and a civil society leader, which are added after the main informational slides (common to both treatment videos).¹⁹ The statements are introduced by the narrator asking “So why is it important for citizens to know about how oil and gas revenues are being utilised?”, and then continuing with “Let’s listen to what key stakeholders have to say”. The first statement is from a well-known member of parliament (MP) from the Western Region (which contains the six oil districts) who has regularly featured in national and subnational news on issues regarding natural resource management.²⁰ In the video, the MP calmly and clearly explains why transparency is important in oil and gas revenue management; what PIAC is and what its role is; and that PIAC produces two reports per year.

¹⁷ This randomization method was chosen due to the underlying RCT. Randomization for our experiment was done by the survey program through random choice of one number from 1 to 3, with each number linked to one of the three videos. Checks showed that respondents watched their assigned video until the end.

¹⁸ All video voiceovers in the English version are transcribed in Appendix B.

¹⁹ The politician and civil society leader were clearly identified by their name and job title in a caption at the bottom of the screen.

²⁰ At the time of writing, the politician is Deputy Minister for Lands and Natural Resource, a position he has held since July 2021.

He goes on to detail how he – like all MPs – has just received a copy of the latest PIAC report, and states that he “is still going through” the report. He then promises to “get back to [his] constituency” to explain to them how “our oil money is being used”, because “it is important that our people” know “how these resources are utilized by our leaders”.

The second statement is from the Director of the Centre for Extractives and Development, Africa (CEDA), a Ghanaian NGO established in 2014 that focuses on policy analysis, advocacy, and citizen mobilization and training on extractives issues.²¹ Directly engaging with the listener both in language and gestures, our civil society leader emphasizes the importance of petroleum-related information for all citizens, explaining that “governments are meant to collect the revenues and use [them] to improve the life of people by constructing roads, schools, hospitals and things like that”. He stresses that “you the citizens [...] need to have this information” to ensure that the projects that should have been realized with resource revenues have been implemented, and to “hold government to account” on how oil revenues are spent “because that is what our democracy is about”. The concluding slide with the contact details, in common with the first treatment video, is shown at the end of this second treatment video to make it around seven minutes long.

The rapidly growing literature on role models gives varying interpretations of who or what a ‘role model’ is. Morgenroth et al. (2015: 466) set up a theoretical framework to enable a more systematic interpretation and ascribe three possible functions to role models: (a) acting as behavioral models, (b) representing the possible, and (c) being inspirational. We are reluctant to call our two personalities ‘role models’ due to the common interpretation that role models should be either famous and therefore aspirational, or similar to subjects and therefore relatable.²² Nevertheless, our two personalities and the content of their messages most closely corresponds to the first function of Morgenroth’s theory. That is, we use our speakers to try to influence what our subjects perceive as the behavior to be adopted in the context of NRR management.

3.3. Telephone follow-up

The main survey is arguably open to concerns of experimenter demand effects due to the contemporaneous implementation of treatment and outcome measurement (common in many experimental settings). All survey experiment respondents were followed up by telephone by local enumerators in February-March 2020, with 925 participants (40 % of the sample) successfully interviewed for the brief follow-up survey. Attrition was thus high, with the most frequent reason for non-participation being that the telephone number had changed (13 %) or had been switched off (23 %), or that no one would answer (10 %). A little under 5 % refused to be interviewed once successfully contacted, and in 9 % of cases the interview was deemed invalid or incomplete. All non-answering lines were called five times. The interviews were conducted in English, Twi or Ewe. DA and UC members were more likely to participate in the follow-up, which may partially explain why the follow-up sample had relatively fewer females and ordinary citizens, and higher average education and political interest levels than our main

²¹ Prior to joining CEDA, our civil society leader was responsible for establishing the institutional and program presence of the Natural Resource Governance Institute (formerly Revenue Watch) in sub-Saharan Africa as Africa regional coordinator and later served as deputy director, Africa, from 2008 to 2016. He started working for the Ford Foundation in 2021.

²² Note that the theory does not require role models to be well-known to subjects. Much of the experimental literature in fact sets a randomly chosen ‘leader’ to act as a role model in experiments, see e.g., Moxnes and van der Heijden (2003), Gächter and Renner (2018) and the contributions cited therein. In robustness tests described below, we test for heterogeneous effects among the respondents most likely to know our two speakers and find that our main results hold.

sample (see summary statistics in Table A1 in the Appendix).²³

3.4. Empirical methodology

Given successful randomization into the control and two treatment groups, the responses to our outcome variables will only vary with the exposure to the video treatments. In our analysis, we first compare the control group with the two treatment groups collapsed (Eq. (1)) and then compare the two treatment groups separately (Eq. (2)) to see whether the role models had an additional impact on our outcome variables. We use ordinary least squares estimations with standard errors clustered at district level and report results both with and without covariates.²⁴ Our first equation is therefore

$$y_i = \alpha + \beta_T T_i + \beta_X X_i + \mu_r + \varepsilon_i \quad (1)$$

where y_i is our outcome variable for the individual i , α is the constant term, T_i is a dummy variable taking the value of 1 if the individual i is in one of the two treatment groups, X_i is a vector of control variables, μ_r is the region fixed effect, and ε_i is the individual error term.

To compare the two individual treatments with the control group we use the following specification:

$$y_i = \alpha + \beta_{T1} T1_i + \beta_{T2} T2_i + \beta_X X_i + \mu_r + \varepsilon_i \quad (2)$$

where $T1_i$ is a dummy that takes the value of 1 if the individual was shown the treatment video 1 and $T2_i$ a dummy for those who was shown the treatment video 2 (i.e., the video with the encouragement message). We use a Wald test to determine whether the two treatment effects are statistically different.

In the case that our treatments did not have perfect take-up, the estimated coefficients can be considered as intention-to-treat effects. To measure take-up, we asked respondents a control question for which the T1 and T2 video s provided an answer (i.e., how many regions had received oil funded projects, the correct answer being all). Our treatment take-up dummy equals one if the respondent answered this question correctly, and zero otherwise (i.e., for those who gave a wrong answer or did not answer the question).

4. Results

We show detailed summary statistics for all data used in the analysis in the main survey and follow-up survey, with the questions and coding, in Table A1 in the Appendix. We distinguish between the take-up control question (main sample only); our main outcomes including the block of “satisfaction” questions, the “influence” question, and the block of “intention to act/actions taken” questions; and the series of control questions based on respondent data gathered during the underlying field experiment baseline survey.

Our control variables include the age, gender, and education level of the respondent, his/her status as a common citizen, DA member, UC member, traditional authority (chief or queen mother) or opinion leader (e.g., a teacher, religious leader), self-declared living conditions of the household, and the respondent’s general interest in politics. Further, we code a dummy for respondents living in urban areas. We test for balance between our treatment and control groups using our control variables, field experiment treatment status, and satisfaction with how oil and gas revenues are handled in Ghana. The results are reported in Table A2 in the Appendix, with no indication of systematic differences between the

²³ Follow-up respondents were slightly less likely to be in the control group than in the main survey (difference significant at 10% level) but had the same likelihood of being in T1 or T2. There was no significant difference between the main and the follow-up samples in the mean share of opinion leaders, urban dwellers and respondents from oil and gas or mining districts.

²⁴ In additional results available in the Appendix, we replicate the main OLS specifications using logit or ordered logit estimations.

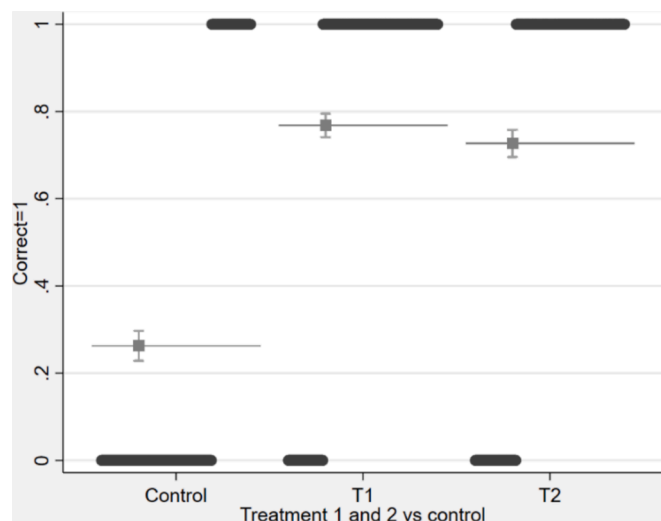


Figure 4. Means of take-up question. 1 indicates a correct answer, and 0 incorrect or no answer. The graph shows the effect of receiving each treatment video versus the placebo video (control). The squares denote the average response, with whiskers showing the 95% confidence intervals. The solid black marks indicate the frequency of answering correctly (1) or incorrectly (0).

treatment arms. Nevertheless, we control for field experiment treatment status in our analyses.

Before describing our main outcome variables, it is worth examining our take-up check, which is based on a pure knowledge question designed to gauge the attention paid to the video. The respondent was asked a factual question that she should have been able to answer after watching one of two treatment videos, namely “How many of Ghana’s ten regions have received oil and gas revenues since 2011 to pay for development projects?”. The correct answer was all ten regions (coded as dummy variable = 1), which we would expect treatment groups to choose more often than the control group. Overall, only 62 % of the respondents answered the question correctly, but the rate of correct answers varied substantially between the control and treatment groups (see Figure 4): only 26 % of the control group answered correctly, while 77 % in T1 and 73 % in T2 got this right.²⁵

4.1. Descriptive results

As mentioned above, we have three blocks of questions to measure our main outcomes. In the first block, the respondents answered two questions that measure their self-reported **satisfaction** with the current handling of oil and gas revenues in general, and with the type of development projects that have been funded by the ABFA in the respondent’s home region. The first question was also asked in the first part of the survey: we can thus control for respondents’ baseline levels of satisfaction prior to seeing the videos in a mini-difference-in-differences strategy.

An overview of the responses given pre- and post-treatment in the main survey, and in the follow-up survey, is shown in Appendix Figure A1. For both satisfaction questions, we used a 5-point Likert scale from 0 (very dissatisfied) to 4 (very satisfied). There is a clear tendency for treated respondents to report higher levels of satisfaction with the handling of resource revenues than respondents in the control group, shown in Figure A2 in the Appendix. Moreover, satisfaction levels among treated participants are positive (i.e. above 2), though there is no significant difference between the two treatment groups. Respondents in the control group instead are on average dissatisfied with the handling

²⁵ OLS regression results that regress the take-up question on the different treatments and other covariates can be found in Appendix Table 3.

of resource revenues. However, this positive treatment effect disappears in the follow-up survey two-and-a-half years later. The picture looks very similar for respondents’ satisfaction with the development projects funded by the ABFA in the respondent’s region (see Figure A3 in the Appendix).

Figure A4 in the Appendix shows the change in reported levels of satisfaction with the handling of oil and gas revenues from pre-treatment to post-treatment by treatment arm.²⁶ From similar levels of dissatisfaction among all respondents before the video treatments, there is a clear increase in satisfaction levels among the two treated groups, while respondents in the control group remain dissatisfied on average.

In the second block of questions, the respondents were asked to what degree they agree with the statement that they and other people can **influence** how revenues from oil and gas are handled in Ghana. Again, a 5-point Likert scale was used for the replies. Agreement with the statement was very high across the board, with 85 % of the respondents either somewhat or completely agreeing in the main sample, and 83 % agreeing in the follow-up sample. Respondents across control and treatment groups on average believe in citizens’ ability to influence the use of resource revenues (see Appendix Figure A5). Nevertheless, small positive changes in the means can be spotted for both treatment groups in the main survey, with treatment 2 – with role-model statements – showing significantly higher agreement than the control group, while the difference between treatment 1 and the control appears insignificant.

Our last block of outcome variables examines respondents’ **stated intention to take action** (or reported action taken in the follow-up survey) directed at contributing to better use of revenues from oil and gas in near future. The following potential actions were read in turn to the respondents, with the request to provide a yes–no answer to each:

1. Discuss the issue with family, friends or colleagues
2. Discuss the issue with traditional leaders
3. Contact a Unit Committee member
4. Contact a District Assembly member
5. Contact the Public Interest Accountability Committee (PIAC)
6. Call radio or write a letter to media
7. Participate in a community meeting to discuss the use of oil and gas revenues
8. Vote differently in elections

The intention-to-act rates are very high (as illustrated by the black bars in Figure 5), ranging from 79 % who state that they think they will call a radio or write a letter to media, to 98 % who say they intend to participate in a community meeting to discuss revenue management. Contacting PIAC (82 %), voting differently in elections (84 %), and discussing the issue with traditional leaders (89 %) were the other actions that received somewhat lower rates while discussing with family, friends and colleagues (95 %) or contacting UC member (96 %) or DA member (97 %) received near universal support. Figure A6 in the Appendix indicates (weak) changes in means for the intention to discuss the issue with family, friends or colleagues; contact media or PIAC; and vote differently.²⁷

When asked in the follow-up about whether the respondent had in the past 12 months engaged in these activities, the actual rates were

²⁶ A noteworthy change is that the response rate for the question went from 1864 respondents (pre treatment) to 2176 (post treatment), potentially indicating that some respondents felt more comfortable to answer the question after having received information on the issue. The nearly 400 respondents who did not reply to the question the first time were on average more satisfied with revenue handling (average score of 2.6) compared to those who had given an answer to the question before (average score of 2.1).

²⁷ The other four intention-to-act outcomes do not suggest significant treatment effects (not shown).

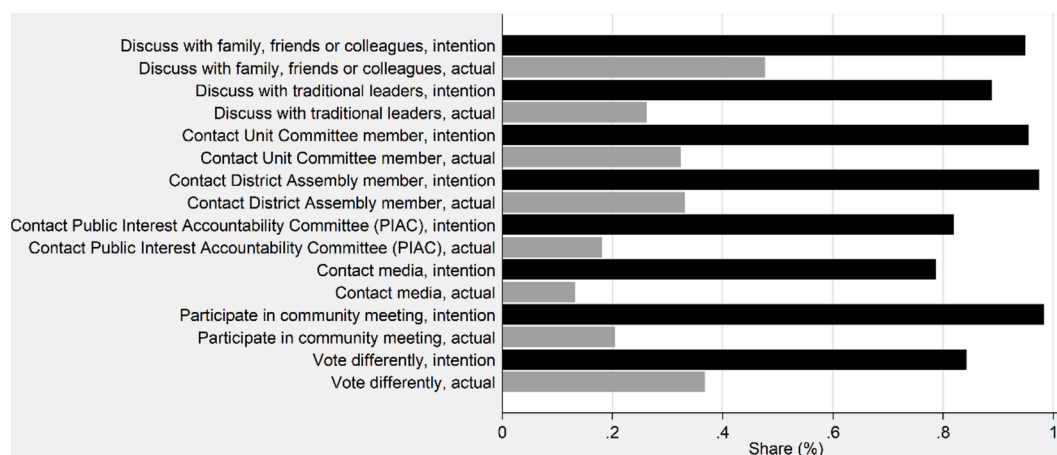


Figure 5. Stated intention to take action directed at contributing to better use of extractive revenues in the main sample (black bars) and the reported action in the follow-up sample (grey bars).

substantially lower (see grey bars in Figure 5): 47 % had discussed the issue with family, friends and colleagues; 33 % had discussed it with their local DA; 32 % discussed it with a UC; 26 % with a traditional leader; 20 % had participated in a community meeting to discuss revenue management; and 13 % had contacted the media. 43 % of those who had voted in the previous District Assembly or Unit Committee elections (held in December 2019) stated that how the oil and gas revenues had been handled in Ghana was somewhat or very important in their decision who to vote for.

4.2. Estimation results

In order to better understand the treatment effects and the possible other variables affecting our outcomes, we now turn to our estimation results. We focus on the results from the main survey; graphical results of the follow-up survey discussed above indicate that there are no long-term effects of our interventions, a finding which is confirmed in OLS and logit estimations for the follow-up survey in Appendix Tables 8a-9c.

Satisfaction. Our first block of outcomes looks at levels of satisfaction with current oil and gas revenue management. The OLS regression results in Table 1 show that the video treatments have a positive overall impact on the level of satisfaction with the current handling of oil and gas revenues.²⁸ Having seen either treatment video one (T1) or treatment video two (T2) increases the level of satisfaction by 1.20 points (without covariates) or 1.16 (with covariates), shown in columns 1 and 3, respectively. The individual treatments vary between 1.23 (T1) and 1.17 (T2) (without covariates) and 1.17 (T1) and 1.15 (T2) (with covariates), as seen in columns 2 and 4, respectively. Exploiting our mini-difference-in-differences design for this survey question, we can also show that the treatments have a significant positive impact on the change in satisfaction between pre- and post-treatment (columns 5–8), with similar coefficient magnitudes as before. Wald tests show that coefficients for T1 and T2 are not significantly different from each other, implying that our encouragement messages have no additional impact on satisfaction levels. This is not surprising given that the message of the two ‘role models’ was aimed primarily at encouraging belief in citizen influence and greater citizen demand for accountability in revenue management.

The only covariates that show significant results are baseline satisfaction, education and residing in an urban area. A higher baseline satisfaction is positively linked to satisfaction post treatment, while both higher education levels and urban residence have a negative coefficient.

²⁸ Appendix Table 4 shows results for ordered logit estimations, which are very similar to our main OLS results.

The underlying field experiment dummies are insignificant.

Watching a treatment video also increased the satisfaction with the development projects undertaken with petroleum revenues in the respondent’s region, with an average increase of around 0.8 points in satisfaction levels after having seen either treatment video (see Appendix Table A5a-A5b). Again, there is no significant difference between the two treatments.

Citizen influence on revenue handling. We next look at whether our treatments affected respondents’ sense of citizens being able to influence the handling of oil and gas revenues. Recall that our encouragement message in T2 is expected to have a particular impact on this outcome. Indeed, Table 2 shows that this is the case: watching either treatment video has a significant positive impact on respondents’ belief in citizen influence (columns 1 and 3), an effect which is being driven by treatment video 2. Columns 2 and 4 show that seeing treatment video 1 made no significant impact, while seeing the encouragement message in treatment video 2 increased agreement with the relevant statement by over 0.2 points. The Wald test shows that the coefficients for T1 and T2 are significantly different from each other.²⁹

Our covariates suggest our category of ‘‘common citizens’’, i.e. those with no elected or traditional leadership or other opinion-leader role, feel less confident of citizens’ ability to influence revenue management. Education and self-declared political interest levels instead are positively related to the belief in citizen influence on revenue management. The RCT treatment dummies are again insignificant.

Intention to act. Lastly, we explore whether the treatments influence respondents’ willingness to take different types of action linked to their ‘voice’ option. Half of our eight intended-action outcomes were significantly affected by our treatments; results for these are shown in Table 3. Respondents who watched either treatment video were around 3 percent more likely to say they would discuss revenue-management issues with friends, family or colleagues (Panel A, columns 1 and 3); 4–5 percent more likely to say they would contact a radio or other media outlet for the same reason (Panel A, columns 5 and 7); around 3.5 percent more likely to take resource revenue management policies into account when voting (Panel B, columns 9 and 11); and between 6–6.8 percent more likely to say they will contact PIAC (Panel B, columns 13 and 16).

Looking at individual treatment effects, the results seem to be driven by the information-only video (T1) for the first intended-action outcome (Panel A, columns 2 and 4), and by the information video with encouragement message (T2) for the media contact and voting outcomes (Panel A, columns 6, 8, and Panel B, columns 2 and 4, respectively).

²⁹ The ordered logit results in Appendix Table A6 show similar results.

Table 1
Satisfaction with current handling of oil and gas revenues.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Satisfaction	Satisfaction	Satisfaction	Satisfaction	Change in satisfaction	Change in satisfaction	Change in satisfaction	Change in satisfaction
Watched a treatment video	1.202*** (16.36)		1.163*** (15.32)		1.156*** (13.46)		1.170*** (13.37)	
T1: watched information video w/ out encouragement		1.232*** (15.80)		1.174*** (14.23)		1.158*** (12.07)		1.183*** (12.19)
T2: watched information video w/ encouragement		1.166*** (14.22)		1.150*** (13.23)		1.153*** (11.21)		1.155*** (11.13)
Baseline satisfaction with revenue use			0.291*** (11.47)	0.292*** (11.47)				
Age			0.00128 (0.430)	0.00132 (0.439)			-0.00286 (-0.851)	-0.00282 (-0.835)
Gender: 1 = Female			0.0115 (0.110)	0.0122 (0.116)			0.0320 (0.265)	0.0328 (0.271)
Education			-0.0522*** (-3.529)	-0.0522*** (-3.525)			-0.0256 (-1.391)	-0.0257 (-1.391)
Common citizen			0.114 (1.238)	0.113 (1.228)			-0.0322 (-0.301)	-0.0329 (-0.307)
HH living conditions			-0.0398 (-1.190)	-0.0402 (-1.196)			-0.137*** (-3.552)	-0.137*** (-3.544)
Political interest			-0.0109 (-0.465)	-0.0109 (-0.461)			-0.00405 (-0.139)	-0.00394 (-0.136)
Mainly urban			-0.246*** (-3.773)	-0.246*** (-3.774)			-0.231*** (-2.840)	-0.231*** (-2.840)
Field experiment T1			0.0683 (0.755)	0.0682 (0.754)			-0.0293 (-0.249)	-0.0294 (-0.249)
Field experiment T2			-0.0215 (-0.220)	-0.0222 (-0.228)			-0.167 (-1.209)	-0.168 (-1.216)
Field experiment T3 (=T1 + T2)			0.137 (1.283)	0.138 (1.289)			-0.00352 (-0.0259)	-0.00295 (-0.0217)
Observations	2,176	2,176	1,780	1,780	1,784	1,784	1,780	1,780
R-squared	0.147	0.147	0.226	0.226	0.097	0.097	0.113	0.113
Wald test T1 = T2 p-value		0.289		0.751		0.959		0.769

Note: OLS estimations. Satisfaction is measured on Likert scale of 0–4. All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Ordered logistic regression results for the same specifications can be found in Appendix Table 4.

Table 2
Belief in citizens' ability to influence handling of oil and gas revenues.

	(1)	(2)	(3)	(4)
Watched a treatment video	0.137** (2.134)		0.133** (2.109)	
T1: watched information video w/out encouragement		0.0777 (1.057)		0.0753 (1.057)
T2: watched information video w/ encouragement		0.208*** (3.154)		0.202*** (3.079)
Age			-0.00177 (-0.964)	-0.00188 (-1.025)
Gender: 1 = Female			-0.0376 (-0.525)	-0.0415 (-0.585)
Education			0.0347*** (3.984)	0.0348*** (4.012)
Common citizen			-0.175*** (-2.781)	-0.172*** (-2.748)
HH living conditions			0.00993 (0.433)	0.0115 (0.505)
Political interest			0.0455*** (2.767)	0.0450*** (2.740)
Mainly urban			-0.0286 (-0.530)	-0.0275 (-0.507)
Field experiment T1			-0.00751 (-0.0947)	-0.00901 (-0.114)
Field experiment T2			-0.000272 (-0.00405)	0.00105 (0.0157)
Field experiment T3 (=T1 + T2)			-0.00825 (-0.109)	-0.0100 (-0.134)
Observations		2,288	2,288	2,282
R-squared		0.014	0.017	0.041
Wald test T1 = T2 p-value			0.0269	0.027

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3
Intention to act to demand more accountability in oil and gas revenue management.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A	Discuss issue with friends, family, or colleagues				Call radio or write a letter to media			
Watched a treatment video	0.0303** (2.565)		0.0281** (2.477)		0.0519** (2.383)		0.0440** (2.140)	
T1: watched information video w/out encouragement		0.0388*** (3.057)		0.0371*** (3.019)		0.0362 (1.528)		0.0268 (1.199)
T2: watched information video w/ encouragement		0.0199 (1.470)		0.0172 (1.309)		0.0705*** (2.788)		0.0644*** (2.676)
Controls	no	no	yes	yes	no	no	yes	yes
Observations	2,323	2,323	2,318	2,318	2,172	2,172	2,167	2,167
R-squared	0.022	0.023	0.031	0.032	0.038	0.040	0.117	0.118
Wald test T1 = T2 p-value		0.103		0.086		0.131		0.084
Panel B	Vote differently in elections				Contact PIAC			
Watched a treatment video	0.0347* (1.713)		0.0361* (1.800)		0.0676*** (3.401)		0.0597*** (3.062)	
T1: watched information video w/out encouragement		0.0294 (1.289)		0.0307 (1.358)		0.0623*** (2.842)		0.0534** (2.541)
T2: watched information video w/ encouragement		0.0412* (1.835)		0.0427* (1.916)		0.0739*** (3.310)		0.0672*** (3.072)
Controls	no	no	yes	yes	no	no	yes	yes
Observations	2,209	2,209	2,204	2,204	2,106	2,106	2,101	2,101
R-squared	0.053	0.053	0.055	0.056	0.047	0.048	0.150	0.150
Wald test T1 = T2 p-value		0.560		0.554		0.550		0.444

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Control variables include age, gender (dummy), education, common citizen (dummy), HH living conditions, political interest, mainly urban (dummy), and the field experiment dummies. Robust t-statistics in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Only the intention to contact PIAC is affected by both treatments (Panel B, columns 6 and 8). Wald tests (shown at the bottom of Panels A and B in Table 3) indicate that there are significant differences in treatment effects between and T1 and T2 only for the intention to discuss the issue with friends, family or colleagues and to contact media. Recall however that the rate of stated intentions was very high across the board, as described earlier, making it challenging to detect differences in treatment effects. Of the control variables, education, political interest, age

and the RCT dummies show significant links with some of the outcomes.

To gain a summary view of intended action, as well as mitigate issues with multiple outcomes, we aggregate the eight intended-action outcome variables using an index of z-scores. Following a procedure used by Kling et al. (2007) and Armand et al. (2020), we first normalize the individual outcomes by subtracting the mean of the control group and dividing by the standard deviation of the control group. We then average the eight outcome variables to create the index. Results are

Table 4
Intention to act – index of eight intended action variables.

	(1)	(2)	(3)	(4)
Watched a treatment video	0.0800** (2.214)		0.0756** (2.195)	
T1: watched information video w/out encouragement		0.0837** (2.265)		0.0794** (2.255)
T2: watched information video w/ encouragement		0.0756* (1.804)		0.0710* (1.762)
Age			-0.00248** (-2.274)	-0.00247** (-2.272)
Gender: 1 = Female			-0.0897** (-2.044)	-0.0895** (-2.036)
Education			0.0135** (2.548)	0.0135** (2.544)
Common citizen			-0.0952*** (-2.813)	-0.0954*** (-2.828)
HH living conditions			0.0306*** (2.647)	0.0306*** (2.645)
Political interest			0.0340*** (4.144)	0.0340*** (4.129)
Mainly urban			-0.0198 (-0.756)	-0.0199 (-0.758)
Field experiment T1			0.0569 (1.450)	0.0571 (1.459)
Field experiment T2			0.0530 (1.395)	0.0529 (1.393)
Field experiment T3 (=T1 + T2)			0.0778* (1.842)	0.0780* (1.848)
Observations	1,920	1,920	1,916	1,916
R-squared	0.021	0.021	0.073	0.073
Wald test T1 = T2 p-value		0.794		0.784

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

shown in Table 4. Watching either treatment video increases the intention to take any action by 7.5–8 points (columns 1 and 3), with no statistical difference between the individual treatments (columns 2 and 4). From the control variables we see that higher education, self-reported living conditions, political interest and having received the combined RCT treatment are significantly linked to more intention to act, while females, common citizens, and older respondents have less intention to act.³⁰

4.3. Heterogeneity analysis

One concern is that effects may be driven by a heightened sensitivity to issues surrounding both petroleum and other natural resource exploitation in those districts most affected by resource extraction. In the same vein, respondents from these districts might also be more familiar with our ‘role models’ and therefore react differently to our second treatment video. We therefore perform a heterogeneity analysis focusing on the six coastal districts closest to offshore oil and gas platforms, as well as on the officially designated mining districts, by adding an interaction term between our treatment dummies and a dummy for oil and mining districts.³¹ We find that there are indeed differential effects on our two satisfaction outcomes, but not on other outcomes – and only for our treatment video 2 with the encouragement message.

The results are presented in Appendix Table A10. The encouragement treatment had stronger positive effects on respondents from oil and mining districts: they were even more satisfied with both overall revenue management and the development projects funded by ABFA than respondents in other districts. Treatment video 1 with only the information instead showed no significantly different effects in oil and mining districts.

We might also believe that treatment effects are stronger among respondents with an intrinsic motivation to take an interest in resource revenue management, i.e. among (elected and non-elected) duty bearers and people who are more politically interested. When we explore these possible heterogeneous effects, we generally find no significant differential effects on any of our outcomes, which also goes some way towards supporting external validity of our results (given that elected politicians are over-represented in our sample compared to the Ghanaian population).³²

Finally, it is worth looking more closely at the link between intention to act and undertaking an action. We saw above that our treatments affected four of our eight intended-action outcomes in the main survey, but that results did not persist on average across the sample in the follow-up survey two years later. Appendix Figure A7 focuses on the treatment effects on self-reported actions undertaken in the previous 12 months for the subsample of respondents in our follow-up survey who had stated their intention to undertake the relevant action in the main survey. With other words, it directly answers the question whether good intentions are followed by actions. The sobering finding is that even among these subgroups of respondents, treatment effects on stated intentions did not result in actual behavioral change.

³⁰ Ordered logit results for these outcomes, as well as OLS and ordered logit results for all other intention-to-act outcomes, can be found in Appendix Table A7a–A7c.

³¹ We did not ask respondents about their political beliefs or previous voting behavior – information which can be considered sensitive – so we cannot test for heterogeneous effects along political party lines.

³² The two exceptions are that those who say they are politically more interested show lower treatment effects on intended actions when using the combined treatment, which is driven by T1 (T2 remains positive and significant and unaffected by political interest). The politically more interested respondents also show higher levels of satisfaction with the current handling of resource revenues when exposed to T2. Results are available upon request.

5. Conclusions

Many developing countries rely on the extractives sector as a source of government revenues; however, these revenues are often also mis-managed and can be the cause of corruption, weak institutions, and government ineffectiveness in what has been termed the “resource curse” (see e.g. van der Ploeg 2011). Transparency has been proposed as an antidote to many of these evils, though there is mixed evidence on its efficacy (e.g. Kasekende et al. 2016; Rustad et al. 2017). Some of the reasons why this may be the case is that even where information on resource revenues is publicly available, citizens may not receive or understand it, not be aware of their rights to demand accountability, or not feel motivated to make use of their rights.

We look at how citizens can be motivated to demand accountability in the management of public revenues, focusing on the case of petroleum revenue management in Ghana. Despite Ghana’s strong transparency framework in petroleum revenue management, Lujala et al. (2020) and Brunnschweiler et al. (2021) find that Ghanaians are dissatisfied with how natural resource revenues were managed in the country, had limited access to relevant information regarding the extractives sector, and had rarely engaged in voicing their concerns about the sector and how its revenues were used. We carry out a video survey experiment with over 2300 respondents to provide easily understandable and relevant information and use a politician and a civil society leader for additional encouragement and motivation to act. We return two years after our main survey to test whether our treatments had longer-term effects.

We find that providing information significantly increases knowledge about current revenue management and leaves treated respondents on average satisfied with the way revenues are handled and spent, while our control group are dissatisfied. We also find increased intention to demand more accountability through greater debate and contacting the revenue watchdog, PIAC. The encouragement message has an additional effect: it increases the sense that citizens can influence how petroleum revenues are used, and the intention to contact media to ensure better accountability. However, when we return for a follow-up survey, we unfortunately find no persistent differences between the control and the treated groups, not even among respondents who had declared their intention to demand accountability in the main survey. Our outcomes are based on stated intentions (or actions) only, which is a weakness in our approach.

The experiment suggests that providing relevant information can affect attitudes and intended behavior and that role models can give valuable encouragement for behavioral change, but that a one-off treatment has short-lived effects only. The determination of how long effects last, and whether repeated interventions would be able to overcome the weak link between intended action immediately after the intervention and actual personal action in the longer term, are left to future research. We believe this would be worthwhile, as our relatively low-cost intervention could prove a useful tool for encouraging citizens to make use of their right to demand accountability in public revenue management.

Finally, our experiment provides another cautionary note. Transparency theory sees information dissemination as inherently good because it equips citizens with knowledge that helps them hold their leaders accountable. This rests on the assumption that better-informed citizens actually use the acquired information. However, if information disclosure increases citizen satisfaction with how public revenues are handled – as in our case – it may build trust and end up supporting the status quo instead of initiating change. Future research should examine how the potentially problematic “pacifying” effect of transparency can be overcome.

CRedit authorship contribution statement

Christa Brunnschweiler: Writing – review & editing, Writing –

original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Ishmael Edjekumhene**: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Investigation, Funding acquisition, Conceptualization. **Päivi Lujala**: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Sabrina Scherzer**: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Formal analysis, Data curation.

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Declaration of competing interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data and code will be made freely available on Mendeley and author webpages upon publication

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Appendix A: Additional figures and tables

Figures

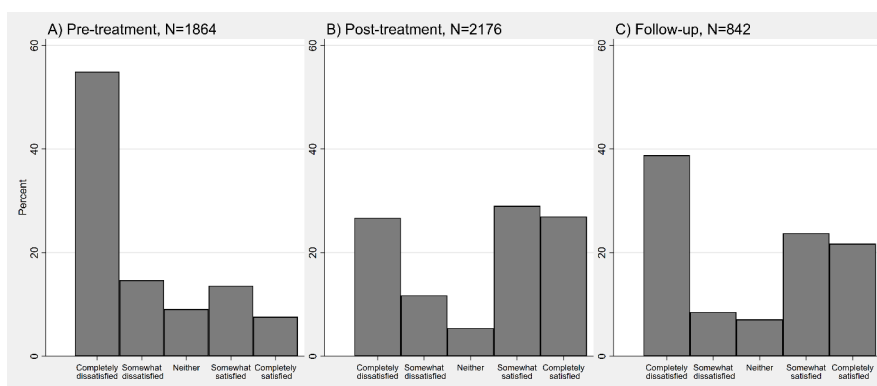


Figure A1. Satisfaction with revenue management prior (A) and after (B) watching one of the videos, and in the follow-up survey (C).

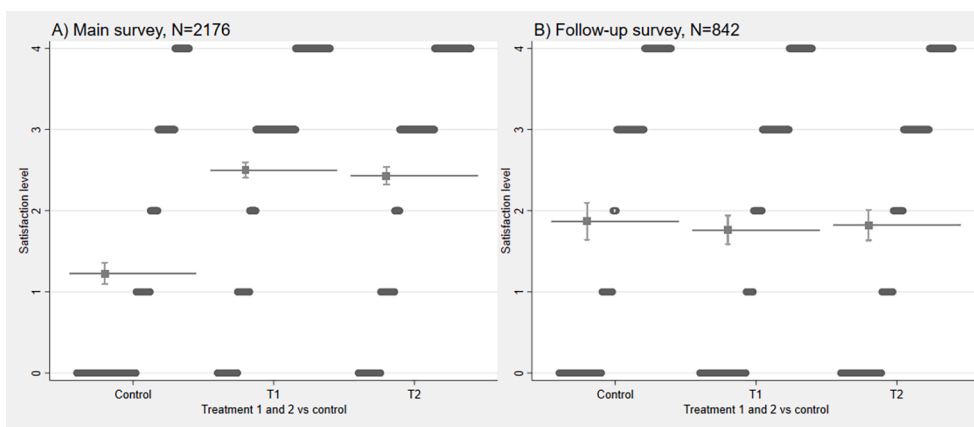


Figure A2. Means of level of satisfaction with current handling of oil and gas revenues (likert scale 0–4). Graph A) shows the effect for the main survey, and graph B) for the follow-up phone survey. The squares denote the average response, with whiskers showing the 95% confidence intervals, and solid black marks indicating the frequency of responses.

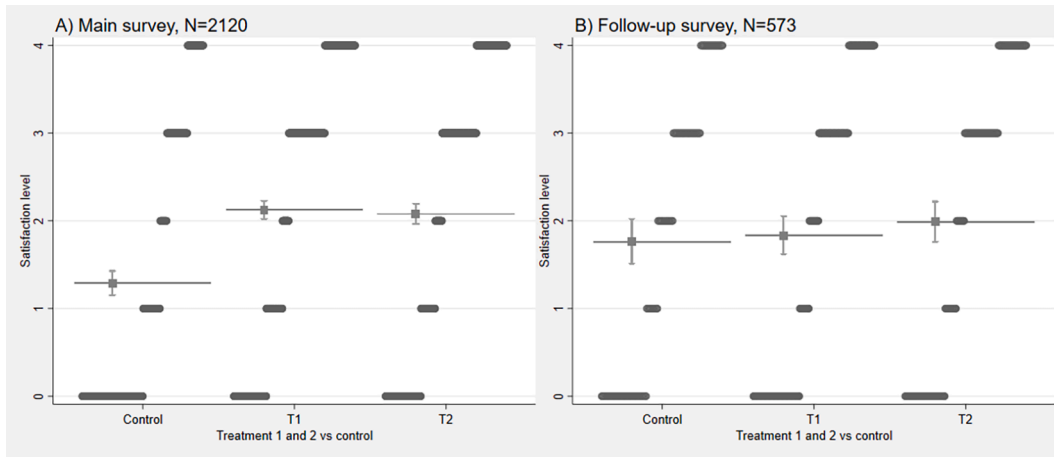


Figure A3. Means of level of satisfaction with development projects funded by ABFA in respondent's region (Likert scale 0–4). Graph A) shows the effect for the main survey, and graph B) for the follow-up phone survey. The squares denote the average response, with whiskers showing the 95% confidence intervals, and solid black marks indicating the frequency of responses.

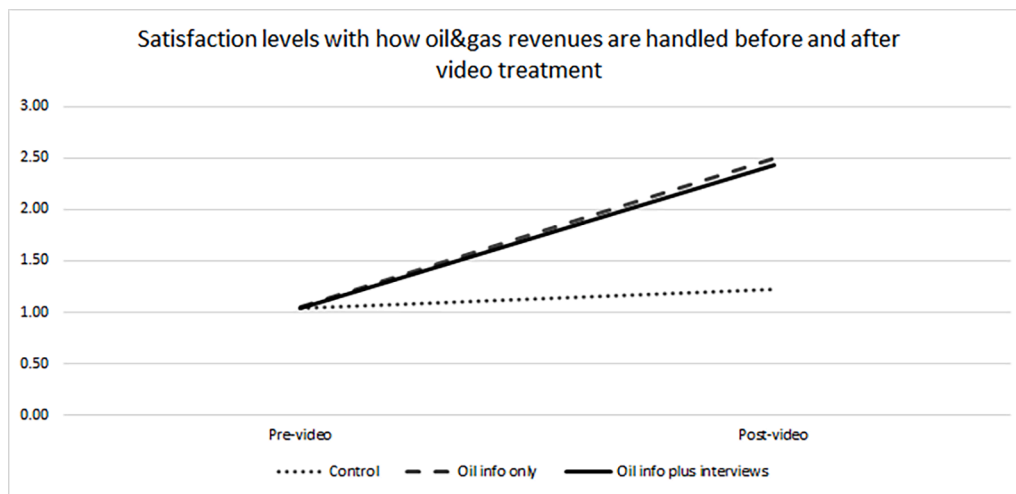


Figure A4. Changes in mean level of satisfaction with current handling of oil and gas revenues between pre-video and post-video. The dotted line shows mean satisfaction level of control group who viewed the placebo video; the dashed and solid lines show mean satisfaction levels of groups treated with information videos with and without encouragement message, respectively.

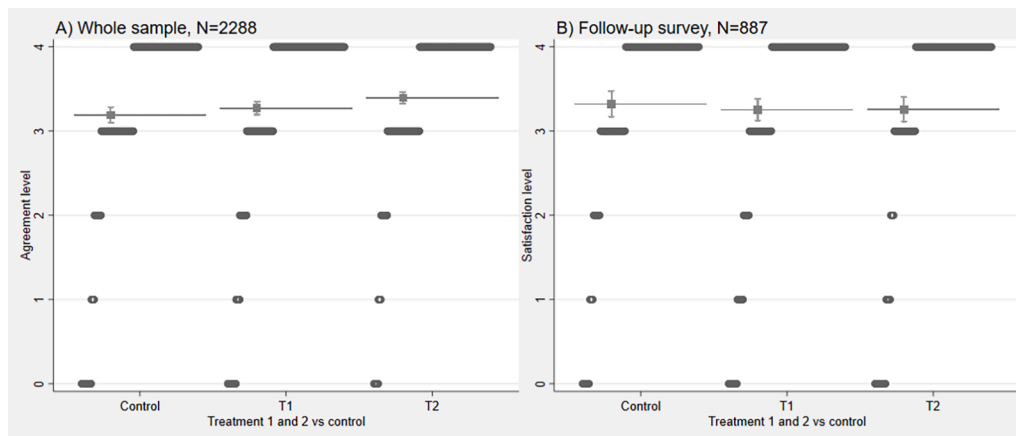


Figure A5. Means of level of agreement with statement on personal influence on how oil and gas revenue is handled (Likert scale). Graph A) shows the effect for the main survey, and graph B) for the follow-up phone survey. The squares denote the average response, with whiskers showing the 95% confidence intervals, and solid black marks indicating the frequency of responses.

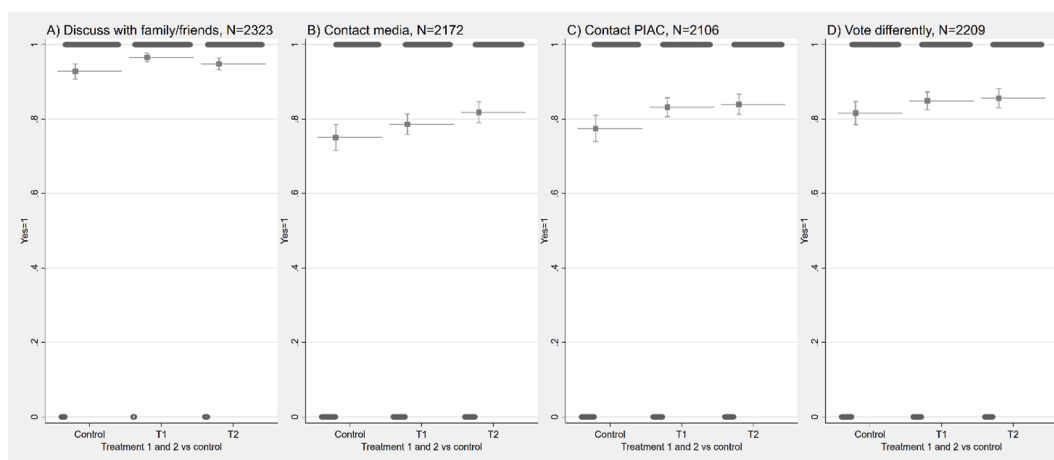


Figure A6. Means for intention (A) to discuss issue of petroleum revenue management with family, friends or colleagues, (B) to contact the media, and (C) to contact PIAC, (D) to vote differently in next election. Results refer to the main survey. The squares denote the average response, with whiskers showing the 95% confidence intervals, and solid black marks indicating the frequency of responses.

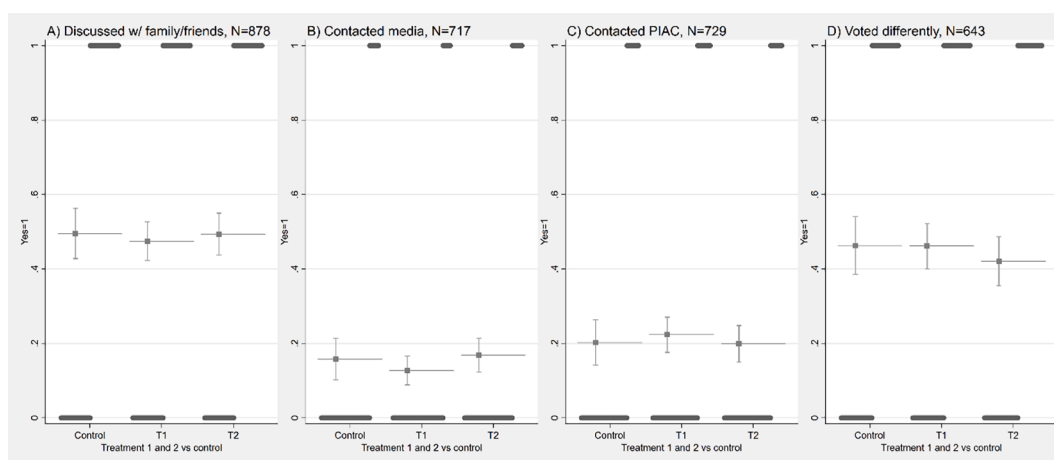


Figure A7. Means for self-reported actions in the past 12 months: (A) discussed issue of petroleum revenue management with family, friends or colleagues, (B) contacted media, and (C) contacted PIAC, (D) voted differently in last election. Results are given for subsample of respondents in our follow-up survey who had stated their intention to undertake the relevant action in the main survey. The squares denote the average response, with whiskers showing the 95 % confidence intervals, and solid black marks indicating the frequency of responses.

Tables

Table A1

Summary statistics with full survey questions.

Variable	Full sample					Follow-up sample					Question (incl. variable coding)
	Obs	Mean	Std. Dev	Min	Max	Obs	Mean	Std. Dev	Min	Max	
Take-up control	2,363	0.62	0.49	0	1						How many of Ghana's ten regions do you think have received oil & gas revenues since 2011 to help pay for development projects? (0 Incorrect or I do not know, 1 Correct)
Satisfaction w/ oil and gas revenue handling (prior to treatment)	1864	1.04	1.37	0	4						Ghana earns substantial revenues from oil and gas. In general, how satisfied are you with how these revenues are handled? (0 Completely dissatisfied, 1 Somewhat dissatisfied, 2 Neither satisfied nor dissatisfied, 3 Somewhat satisfied, 4 Completely satisfied)
Satisfaction w/ oil and gas revenue handling (post treatment)	2176	2.18	1.59	0	4	842	1.81	1.65	0	4	Ghana earns substantial revenues from oil and gas. In general, how satisfied are you with how these revenues are handled? (0 Completely dissatisfied, 1 Somewhat dissatisfied, 2 Neither satisfied nor dissatisfied, 3 Somewhat satisfied, 4 Completely satisfied)
Satisfaction w/ ABFA	2120	1.92	1.61	0	4	573	1.87	1.62	0	4	How satisfied are you with the kind of development projects that have been funded in your region with oil and gas revenues? (0 Completely dissatisfied, 1 Somewhat

(continued on next page)

Table A1 (continued)

Variable	Full sample					Follow-up sample					Question (incl. variable coding)
	Obs	Mean	Std. Dev	Min	Max	Obs	Mean	Std. Dev	Min	Max	
Influence	2288	3.29	1.12	0	4	887	3.27	1.22	0	4	dissatisfied, 2 Neither satisfied nor dissatisfied, 3 Somewhat satisfied, 4 Completely satisfied)
Intention to act (SE) / Action taken (F):											To what extent do you agree with these statement: You and other people can influence how revenues from oil and gas are handled in Ghana. (0 Completely disagree, 1 Somewhat disagree, 2 Neither agree nor disagree, 3 Somewhat agree, 4 Completely agree)
											Survey experiment (SE): In the near future, do you think you will engage in any of the following actions directed at contributing to better use of revenues from oil and gas? (0 No, 1 Yes)
											Follow-up (F): In the past twelve months, have you engaged in any of the following actions directed at contributing to better use of revenues from oil and gas? (0 No, 1 Yes)
Discuss home and work	2323	0.95	0.22	0	1	923	0.48	0.50	0	1	(1) Discuss the issue with family, friends or colleagues
Discuss with traditional leaders	2297	0.89	0.32	0	1	920	0.26	0.44	0	1	(2) Discuss the issue with traditional leaders
Contact UC member	2310	0.96	0.21	0	1	921	0.32	0.47	0	1	(3) Contact a Unit Committee member
Contact DA member	2313	0.97	0.16	0	1	921	0.33	0.47	0	1	(4) Contact a District Assembly member
Contact PIAC	2106	0.82	0.39	0	1	917	0.18	0.39	0	1	(5) Contact Public Interest Accountability Committee (PIAC)
Contact media	2172	0.79	0.41	0	1	920	0.13	0.34	0	1	(6) Call radio or write a letter to media
Participate in community meeting	2335	0.98	0.13	0	1	915	0.20	0.40	0	1	(7) Participate in a community meeting to discuss the use of oil and gas revenues
Vote(d) differently	2209	0.84	0.36	0	1	796	0.43	0.50	0	1	(8) Vote differently in next election (survey exp.) / Considered revenue handling when voting (follow-up)
INDEX (of all 8 variables)	1920	0.08	0.56	-3.82	0.35	782	-0.01	0.62	-0.68	1.60	Index of all 8 outcome variables (All variables were standardized by subtracting the mean of the control group and dividing by the standard deviation of the control group. The index is the mean of the standardized variables.)
Control variables											
Age	2,363	47	15	18	110	925	46	14	18	99	Age in years
Gender (female = 1)	2,363	0.18	0.39	0	1	925	0.14	0.35	0	1	Dummy: 1 if respondent is female
Education	2,359	4.61	2.60	0	8	922	5.02	2.50	0	8	What is your highest level of education? (0 None, 1 Incomplete primary school, 2 Completed primary school, 3 Incomplete junior high school, 4 Complete junior, 5 Incomplete secondary/technical school, 6 Completed secondary/technical school, 7 Incomplete tertiary, 8 Completed tertiary)
Common citizen	2,363	0.29	0.45	0	1	925	0.25	0.43	0	1	Dummy: 1 if respondent does not have any leader position
DA member	2,363	0.17	0.38	0	1	925	0.20	0.40	0	1	Dummy: 1 if respondent is District Assembly member
UC member	2,363	0.19	0.40	0	1	925	0.23	0.42	0	1	Dummy: 1 if respondent is Unit Committee member
Traditional authority	2,363	0.11	0.32	0	1	925	0.09	0.28	0	1	Dummy: 1 if respondent is traditional leader
Opinion leader	2,363	0.23	0.42	0	1	925	0.23	0.42	0	1	Dummy: 1 if respondent is opinion leader (teacher, religious leader, youth leader etc.)
Self-declared living conditions	2,362	1.95	1.15	0	4	924	2.02	1.14	0	4	In general, how would you describe your household's present living conditions? (0 Very bad, 1 Fairly bad, 2 Neither good or bad, 3 Fairly good, 4 Very good)
Discuss politics	2,362	2.50	1.60	0	5	925	2.67	1.63	0	5	How often do you discuss political matters and public affairs with friends, family or colleagues? (0 Never, 1 Rarely, 2 Sometimes, 3 Often, 4 Very often, 5 All the time)
Urban (urban = 1)	2,363	0.45	0.50	0	1	925	0.45	0.50	0	1	Dummy: 1 if the district is considered as urban area
Field experiment T1	2,363	0.25	0.43	0	1	925	0.25	0.43	0	1	Dummy: 1 if respondent received meetings treatment in field experiment
Field experiment T2	2,363	0.26	0.44	0	1	925	0.25	0.43	0	1	Dummy: 1 if respondent received ICT treatment in field experiment
Field experiment T3 (=T1 + T2)	2,363	0.24	0.43	0	1	925	0.25	0.43	0	1	Dummy: 1 if respondent received meetings and ICT treatment in field experiment

Note: Control variables are from a baseline conducted for a field experiment in June-August 2016. The dependent variables are from the main survey experiment and its telephone follow-up.

Table A2
Balance tests.

	Means Control	T1	T2	p-value all	Control vs T1	Control vs T2	T1 vs T2
Panel A: Full sample							
Age	46.3	46.0	47.3	0.18	0.74	0.20	0.07
Gender (female = 1)	0.19	0.18	0.18	0.68	0.38	0.65	0.66
Education	4.48	4.71	4.60	0.22	0.08	0.38	0.37
Common citizen	0.29	0.30	0.28	0.53	0.61	0.61	0.26
DA member	0.17	0.16	0.19	0.45	0.67	0.46	0.21
UC member	0.21	0.18	0.19	0.45	0.21	0.45	0.61
Traditional authority	0.10	0.12	0.12	0.40	0.26	0.22	0.86
Opinion leader	0.23	0.23	0.22	0.86	0.85	0.75	0.59
Self-declared living conditions	1.87	2.02	1.94	0.03	0.01	0.25	0.12
Discuss politics	2.44	2.51	2.54	0.53	0.42	0.27	0.71
Urban (urban = 1)	0.41	0.48	0.46	0.04	0.01	0.07	0.51
Field experiment treatment	1.55	1.45	1.45	0.15	0.07	0.10	0.95
Pre-video satisfaction with how oil and gas revenues are handled in Ghana	1.03	1.05	1.04	0.98	0.85	0.92	0.93
N	636	944	783	2,363			
Panel B: Follow-up sample							
Age	46.1	44.7	46.6	0.16	0.22	0.68	0.07
Gender (female = 1)	0.14	0.13	0.15	0.59	0.69	0.60	0.31
Education	4.83	5.18	4.96	0.22	0.10	0.57	0.25
Common citizen	0.25	0.23	0.26	0.68	0.62	0.78	0.39
DA member	0.21	0.19	0.21	0.78	0.53	0.91	0.57
UC member	0.23	0.24	0.23	0.98	0.95	0.92	0.86
Traditional authority	0.06	0.09	0.10	0.33	0.25	0.16	0.73
Opinion leader	0.24	0.25	0.20	0.31	0.75	0.32	0.14
Self-declared living conditions	1.99	2.10	1.95	0.21	0.26	0.71	0.09
Discuss politics	2.62	2.63	2.76	0.50	0.94	0.32	0.30
Urban (urban = 1)	0.48	0.47	0.45	0.72	0.84	0.45	0.52
Field experiment treatment	1.58	1.49	1.47	0.47	0.31	0.25	0.84
Pre-video satisfaction with how oil and gas revenues are handled in Ghana	0.92	1.04	1.01	0.62	0.34	0.48	0.81
N	231	377	317	925			

Note: Panel A shows values for main survey, Panel B for the follow-up survey. The first three columns show mean values across three treatment arms (Control, T1, T2). Column 4 shows p-values for F-test of differences across all three groups; columns 5–7 show p-values of pairwise t-tests. H0 is that there is no difference between means. Significant differences are indicated by bold p-values.

Table A3

Take-up question.

	(1)	(2)	(3)	(4)
Watched a treatment video	0.484*** (23.60)		0.477*** (23.73)	
T1: watched information video w/out encouragement		0.503*** (21.46)		0.494*** (21.76)
T2: watched information video w/ encouragement		0.462*** (20.59)		0.458*** (20.76)
Age			-0.00104 (-1.641)	-0.00101 (-1.594)
Gender: 1 = Female			-0.0351 (-1.244)	-0.0339 (-1.206)
Education			0.0226*** (5.454)	0.0226*** (5.462)
Common citizen			0.00245 (0.0973)	0.00147 (0.0585)
HH living conditions			0.0233** (2.605)	0.0229** (2.562)
Political interest			0.0113* (1.852)	0.0115* (1.873)
Mainly urban			-0.0464** (-2.376)	-0.0464** (-2.377)
Field experiment T1			0.0304 (1.284)	0.0305 (1.289)
Field experiment T2			0.00573 (0.277)	0.00506 (0.246)
Field experiment T3 (=T1 + T2)			0.0272 (0.978)	0.0274 (0.986)
Observations	2,363	2,363	2,357	2,357
R-squared	0.215	0.216	0.245	0.245
Wald test T1 = T2		0.050		0.067

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A4
Satisfaction with current handling of oil and gas revenues **Ordered logit.**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Satisfaction	Satisfaction	Satisfaction	Satisfaction	Change in satisfaction	Change in satisfaction	Change in satisfaction	Change in satisfaction
Watched a treatment video	1.483*** (14.97)		1.514*** (13.89)		1.278*** (13.12)		1.299*** (12.91)	
T1: watched information video w/ out encouragement		1.500*** (14.54)		1.505*** (13.25)		1.288*** (12.01)		1.320*** (11.92)
T2: watched information video w/ encouragement		1.462*** (13.39)		1.525*** (12.29)		1.266*** (11.12)		1.274*** (11.02)
Baseline satisfaction with revenue use			0.398*** (10.26)	0.397*** (10.26)				
Age			0.000839 (0.215)	0.000799 (0.202)			-0.00229 (-0.670)	-0.00220 (-0.640)
Gender: 1 = Female			-0.0155 (-0.118)	-0.0157 (-0.119)			0.0336 (0.265)	0.0341 (0.269)
Education			-0.0598*** (-3.061)	-0.0598*** (-3.063)			-0.0285 (-1.504)	-0.0283 (-1.494)
Common citizen			0.132 (1.052)	0.132 (1.052)			-0.0116 (-0.101)	-0.0122 (-0.106)
HH living conditions			-0.0306 (-0.654)	-0.0302 (-0.643)			-0.143*** (-3.409)	-0.144*** (-3.405)
Political interest			-0.0302 (-0.931)	-0.0303 (-0.932)			-0.00908 (-0.302)	-0.00905 (-0.302)
Mainly urban			-0.342*** (-3.961)	-0.342*** (-3.961)			-0.222*** (-2.693)	-0.222*** (-2.693)
Field experiment T1			0.0606 (0.501)	0.0608 (0.503)			-0.0507 (-0.419)	-0.0507 (-0.419)
Field experiment T2			0.00703 (0.0548)	0.00761 (0.0593)			-0.140 (-0.989)	-0.141 (-0.998)
Field experiment T3 (=T1 + T2)			0.130 (0.955)	0.129 (0.948)			-0.0293 (-0.214)	-0.0274 (-0.200)
Observations	2,176	2,176	1,780	1,780	1,784	1,784	1,780	1,780
Wald test T1 = T2		0.610		0.828		0.831		0.687

Note: All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A5a
Satisfaction with development projects (ABFA) **OLS.**

	(1)	(2)	(3)	(4)
Watched a treatment video	0.771*** (9.417)		0.791*** (9.952)	
T1: watched information video w/out encouragement		0.791*** (9.045)		0.817*** (9.620)
T2: watched information video w/ encouragement		0.746*** (8.370)		0.761*** (8.687)
Age			-0.00343 (-1.256)	-0.00339 (-1.234)
Gender: 1 = Female			0.212** (2.200)	0.214** (2.206)
Education			-0.0552*** (-3.581)	-0.0554*** (-3.595)
Common citizen			0.126 (1.419)	0.124 (1.400)
HH living conditions			0.0273 (0.916)	0.0267 (0.890)
Political interest			-0.00328 (-0.146)	-0.00310 (-0.138)
Mainly urban			-0.122* (-1.902)	-0.123* (-1.910)
Field experiment T1			0.0974 (0.928)	0.0979 (0.932)
Field experiment T2			-0.0214 (-0.189)	-0.0226 (-0.200)
Field experiment T3 (=T1 + T2)			0.0914 (0.821)	0.0921 (0.827)
Observations		2,120	2,115	2,115
R-squared		0.097	0.117	0.117
Wald test T1 = T2		0.500		0.396

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A5b
Satisfaction with development projects (ABFA) **Ordered logit.**

	(1)	(2)	(3)	(4)
Watched a treatment video	0.918*** (9.269)		0.952*** (9.809)	
T1: watched information video w/out encouragement		0.938*** (8.931)		0.978*** (9.531)
T2: watched information video w/ encouragement		0.892*** (8.317)		0.920*** (8.609)
Age			-0.00425 (-1.280)	-0.00420 (-1.264)
Gender: 1 = Female			0.226* (1.957)	0.228** (1.961)
Education			-0.0634*** (-3.438)	-0.0635*** (-3.448)
Common citizen			0.138 (1.310)	0.137 (1.298)
HH living conditions			0.0455 (1.210)	0.0449 (1.190)
Political interest			-0.0175 (-0.619)	-0.0172 (-0.607)
Mainly urban			-0.149* (-1.937)	-0.150* (-1.950)
Field experiment T1			0.118 (0.919)	0.118 (0.921)
Field experiment T2			-0.00679 (-0.0513)	-0.00823 (-0.0624)
Field experiment T3 (=T1 + T2)			0.126 (0.936)	0.128 (0.946)
Observations	2,120	2,120	2,115	2,115
Wald test T1 = T2		0.542		0.455

Note: All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.

Table A6
Belief in citizen ability to influence handling of oil and gas revenues **Ordered logit.**

	(1)	(2)	(3)	(4)
Watched a treatment video	0.227** (2.216)		0.210** (2.012)	
T1: watched information video w/out encouragement		0.179 (1.469)		0.156 (1.264)
T2: watched information video w/ encouragement		0.284** (2.561)		0.272** (2.422)
Age			-0.00537* (-1.690)	-0.00544* (-1.704)
Gender: 1 = Female			-0.119 (-1.020)	-0.122 (-1.050)
Education			0.0674*** (4.130)	0.0676*** (4.144)
Common citizen			-0.247** (-2.203)	-0.246** (-2.199)
HH living conditions			0.0335 (0.799)	0.0354 (0.843)
Political interest			0.110*** (3.465)	0.110*** (3.450)
Mainly urban			-0.00865 (-0.0979)	-0.00765 (-0.0864)
Field experiment T1			0.0743 (0.570)	0.0730 (0.561)
Field experiment T2			-0.0271 (-0.233)	-0.0264 (-0.228)
Field experiment T3 (=T1 + T2)			0.0279 (0.220)	0.0249 (0.197)
Observations	2,288	2,288	2,282	2,282
Wald test T1 = T2		0.347		0.305

Note: All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A7a
Willingness to take action to demand more accountability in oil and gas revenue management **Ordered logit.**

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Discuss with family, friends or colleagues	Call radio or write letter to media						
Watched a treatment video	0.585*** (2.943)		0.531*** (2.725)		0.311** (2.445)		0.279** (2.124)	
T1: watched information video w/out encouragement		0.817*** (3.202)		0.774*** (3.069)		0.212 (1.533)		0.165 (1.172)
T2: watched information video w/ encouragement		0.352 (1.503)		0.284 (1.235)		0.435*** (2.779)		0.419** (2.570)
Controls	no	no	yes	yes	no	no	yes	yes
Observations	2,323	2,323	2,318	2,318	2,172	2,172	2,167	2,167
Wald test T1 = T2		0.103		0.086		0.130		0.091
Panel B	Vote differently in elections		Contact PIAC					
Watched a treatment video	0.266* (1.771)		0.277* (1.867)		0.457*** (3.602)		0.449*** (3.165)	
T1: watched information video w/out encouragement		0.222 (1.294)		0.234 (1.382)		0.418*** (2.902)		0.401** (2.551)
T2: watched information video w/ encouragement		0.319* (1.852)		0.331* (1.916)		0.505*** (3.371)		0.507*** (3.077)
Controls	no	no	yes	yes	no	no	yes	yes
Observations	2,209	2,209	2,204	2,204	2,106	2,106	2,101	2,101
Wald test T1 = T2		0.565		0.567		0.556		0.482

Note: All specifications include region dummies and constant term (not shown). Control variables include age, gender (dummy), education, common citizen (dummy), HH living conditions, political interest, mainly urban (dummy), and field experiment dummies. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A7b
Willingness to take action to demand more accountability in oil and gas revenue management – additional variables **OLS.**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Discuss the issue with traditional leaders				Contact an elected representative (UC or DA)				Participate in community meeting			
Watched a treatment video	0.0151 (0.896)		0.0142 (0.861)		0.0112 (1.180)		0.0128 (1.344)		-0.00370 (-0.696)		-0.00381 (-0.703)	
T1: watched information video w/out encouragement		0.0132 (0.703)		0.0132 (0.730)		0.0100 (0.945)		0.0120 (1.151)		-0.00687 (-1.163)		-0.00725 (-1.192)
T2: watched information video w/ encouragement		0.0173 (0.961)		0.0155 (0.843)		0.0127 (1.143)		0.0136 (1.238)		0.000116 (0.0176)		0.000313 (0.0470)
Age			0.000125 (0.239)	0.000123 (0.235)			-0.000864** (-2.228)	-0.000865** (-2.242)			-0.000412** (-1.994)	-0.000418** (-2.017)
Gender: 1 = Female			-0.0874*** (-3.724)	-0.0874*** (-3.740)			-0.0472*** (-3.126)	-0.0473*** (-3.125)			0.00338 (0.513)	0.00314 (0.471)
Education			-0.00176 (-0.623)	-0.00176 (-0.622)			0.00119 (0.721)	0.00119 (0.721)			0.000136 (0.127)	0.000140 (0.130)
Common citizen			-0.0882*** (-4.271)	-0.0881*** (-4.279)			-0.0256** (-2.151)	-0.0255** (-2.153)			-0.00152 (-0.239)	-0.00133 (-0.209)
HH living conditions			0.00807 (1.365)	0.00809 (1.371)			0.000932 (0.252)	0.000948 (0.258)			0.00321 (1.042)	0.00330 (1.068)
Political interest			0.0107** (2.605)	0.0107** (2.602)			0.00664*** (2.750)	0.00663*** (2.747)			0.00543*** (2.696)	0.00540*** (2.699)
Mainly urban			-0.0318** (-2.507)	-0.0317** (-2.504)			-0.0214** (-2.248)	-0.0214** (-2.245)			-0.00700 (-1.294)	-0.00699 (-1.288)
Field experiment T1			0.0212 (1.022)	0.0212 (1.023)			0.00420 (0.368)	0.00419 (0.368)			0.0197*** (2.703)	0.0197*** (2.692)
Field experiment T2			0.0200 (1.139)	0.0200 (1.137)			0.0180* (1.852)	0.0180* (1.846)			0.0143* (1.758)	0.0145* (1.768)
Field experiment T3 (=T1 + T2)			-0.00979 (-0.447)	-0.00981 (-0.449)			0.00119 (0.0965)	0.00118 (0.0960)			0.0208** (2.419)	0.0207** (2.413)
Observations	2,297	2,297	2,292	2,292	2,363	2,363	2,357	2,357	2,335	2,335	2,329	2,329
R-squared	0.026	0.026	0.075	0.075	0.014	0.014	0.042	0.042	0.009	0.010	0.018	0.019
Wald test T1 = T2		0.788		0.881		0.800		0.871		0.289		0.255

Note: OLS estimates. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A8a (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Education			(0.823) 0.135 (0.769)			(-0.292) 0.359* (1.689)	(-0.375) 0.350 (1.646)			(-1.683) -0.0472 (-0.359)	(-1.687) -0.0466 (-0.356)	
Common citizen			-0.0456 (-1.402)			-0.0220 (-0.772)	-0.0219 (-0.771)			0.00208 (0.118)	0.00207 (0.117)	
HH living conditions			-0.0145			-0.0813	-0.0826			-0.123	-0.123	
Political interest			(-0.104) 0.101* (1.671)			(-0.504) 0.218*** (3.980)	(-0.514) 0.222*** (4.051)			(-1.152) 0.0504 (1.304)	(-1.141) 0.0502 (1.301)	
Mainly urban			0.0463 (0.970)			0.00275 (0.0578)	0.00175 (0.0369)			-0.00341 (-0.134)	-0.00322 (-0.126)	
Field experiment T1			-0.0153			-0.104	-0.109			0.0734	0.0732	
Field experiment T2			(-0.117) 0.193			(-0.746) 0.265	(-0.779) 0.275			(0.843) 0.0898	(0.835) 0.0900	
Field experiment T3 (=T1 + T2)			(1.075) 0.164			(1.175) -0.0702	(1.220) -0.0582			(0.738) -0.0822	(0.738) -0.0822	
Observations	842	842	(0.793) 684	573	573	(-0.330) 570	(-0.274) 570	887	887	(-0.689) 883	(-0.688) 883	842
R-squared	0.053	0.054	0.080	0.052	0.052	0.085	0.086	0.017	0.017	0.030	0.030	0.053

Note: All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A8b
FOLLOW-UP Satisfaction and Influence Ordered logit.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		FOLLOW-UP			FOLLOW-UP				FOLLOW-UP			
Watched a treatment video		Satisfaction with revenue handling			Satisfaction with ABFA projects				Citizen influence			
		-0.0430 (-0.268)	0.118 (0.704)		0.228 (1.388)	0.237 (1.394)			0.000937 (0.00643)		-0.0111 (-0.0759)	
T1: watched information video w/out encouragement		-0.0701 (-0.405)		0.130 (0.722)		0.163 (0.934)		0.138 (0.763)		-0.0227 (-0.131)		-0.0533 (-0.304)
T2: watched information video w/ encouragement		-0.0118 (-0.0664)		0.104 (0.541)		0.303 (1.510)		0.352* (1.713)		0.0297 (0.185)		0.0392 (0.244)
Age			0.220*** (3.938)	0.220*** (3.933)								
Gender: 1 = Female			0.00385 (0.647)	0.00392 (0.661)			-0.00157 (-0.240)	-0.00227 (-0.350)			-0.0103* (-1.856)	-0.0105* (-1.907)
Education			0.131 (0.665)	0.132 (0.677)			0.370 (1.579)	0.350 (1.492)			-0.234 (-1.055)	-0.241 (-1.097)
Common citizen			-0.0637* (-1.647)	-0.0638* (-1.648)			-0.0201 (-0.608)	-0.0206 (-0.625)			0.00630 (0.238)	0.00643 (0.243)
HH living conditions			-0.0501 (-0.306)	-0.0503 (-0.307)			-0.0647 (-0.353)	-0.0679 (-0.375)			-0.215 (-1.231)	-0.218 (-1.243)
Political interest			0.108 (1.560)	0.107 (1.530)			0.248*** (3.960)	0.256*** (4.057)			0.109* (1.695)	0.112* (1.730)
Mainly urban			0.0593 (1.016)	0.0598 (1.024)			-0.000859 (-0.0156)	-0.00220 (-0.0401)			0.0109 (0.243)	0.00879 (0.194)
Field experiment T1			-0.0146 (-0.0994)	-0.0144 (-0.0979)			-0.115 (-0.727)	-0.126 (-0.792)			0.0784 (0.553)	0.0824 (0.576)
Field experiment T2			0.219 (1.025)	0.220 (1.025)			0.378 (1.412)	0.392 (1.469)			0.160 (0.766)	0.158 (0.754)
Field experiment T3 (=T1 + T2)			0.156 (0.641)	0.155 (0.640)			-0.00355 (-0.0146)	0.0140 (0.0573)			-0.0441 (-0.227)	-0.0442 (-0.228)
Observations	842	842	684	684	573	573	570	570	887	887	883	883

Note: All specifications include region dummies and constant term (not shown). Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A9a
FOLLOW-UP Action variables 1–4 (OLS only).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	FOLLOW-UP Discussed with family, friends, colleagues				FOLLOW-UP Contacted traditional leader				FOLLOW-UP Contacted unit committee member				FOLLOW-UP Contacted assembly member			
Watched a treatment video	-0.0129 (-0.349)		-0.0194 (-0.537)		-0.00827 (-0.233)		-0.0123 (-0.357)		-0.0762** (-2.175)		-0.0854** (-2.546)		-0.0228 (-0.590)		-0.0287 (-0.755)	
T1: watched information video w/out encouragement	-0.0118 (-0.279)		-0.0167 (-0.401)		-0.0198 (-0.526)		-0.0192 (-0.526)		-0.0759* (-1.852)		-0.0841** (-2.146)		-0.0203 (-0.465)		-0.0262 (-0.610)	
T2: watched information video w/ encouragement	-0.0142 (-0.367)		-0.0225 (-0.589)		0.00531 (0.132)		-0.00418 (-0.106)		-0.0766** (-2.194)		-0.0870** (-2.602)		-0.0257 (-0.644)		-0.0317 (-0.797)	
Age			-0.00293** (-2.293)	-0.00292** (-2.270)			0.00126 (1.163)	0.00123 (1.135)			-0.00283** (-2.252)	-0.00283** (-2.235)			-0.000560 (-0.409)	-0.000547 (-0.400)
Gender: 1 = Female			-0.110** (-2.229)	-0.109** (-2.221)			-0.0353 (-0.895)	-0.0361 (-0.903)			-0.0222 (-0.505)	-0.0220 (-0.498)			0.000623 (0.0136)	0.000908 (0.0197)
Education			-0.00381 (-0.545)	-0.00381 (-0.546)			0.00359 (0.569)	0.00359 (0.571)			0.00623 (1.155)	0.00623 (1.154)			0.00728 (1.332)	0.00727 (1.330)
Common citizen			-0.0507 (-1.206)	-0.0506 (-1.198)			-0.126*** (-3.554)	-0.127*** (-3.566)			-0.200*** (-5.372)	-0.200*** (-5.365)			-0.176*** (-4.446)	-0.176*** (-4.442)
HH living conditions			-0.00885 (-0.593)	-0.00897 (-0.598)			-0.0124 (-1.045)	-0.0121 (-1.015)			-0.0208 (-1.455)	-0.0208 (-1.458)			-0.00266 (-0.176)	-0.00276 (-0.184)
Political interest			0.0450*** (4.643)	0.0451*** (4.653)			0.0153 (1.592)	0.0151 (1.562)			0.0270*** (2.704)	0.0271*** (2.710)			0.0157 (1.499)	0.0158 (1.501)
Mainly urban			-0.0365 (-0.960)	-0.0366 (-0.960)			-0.115*** (-3.489)	-0.114*** (-3.486)			-0.0748* (-1.884)	-0.0748* (-1.883)			-0.0644* (-1.698)	-0.0645* (-1.696)
Field experiment T1			0.0692 (1.250)	0.0693 (1.250)			0.130*** (2.936)	0.130*** (2.932)			0.0923* (1.918)	0.0923* (1.916)			0.118*** (2.706)	0.118*** (2.703)
Field experiment T2			0.0464 (0.984)	0.0465 (0.984)			0.0958** (2.085)	0.0958** (2.086)			0.0360 (0.819)	0.0360 (0.818)			0.0486 (1.197)	0.0487 (1.196)
Field experiment T3 (=T1+T2)			0.0288 (0.633)	0.0288 (0.633)			0.0946** (2.371)	0.0946** (2.369)			0.0205 (0.455)	0.0205 (0.455)			0.0285 (0.656)	0.0285 (0.654)
Observations	923	923	919	919	920	920	916	916	921	921	917	917	921	921	917	917
R-squared	0.015	0.015	0.059	0.059	0.021	0.022	0.076	0.076	0.018	0.018	0.084	0.084	0.022	0.022	0.067	0.067

Note: OLS estimates. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A9b
FOLLOW-UP Action variables 5–8 (OLS only).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	FOLLOW-UP Contacted media				FOLLOW-UP Contacted PIAC				FOLLOW-UP Participated in community meeting				FOLLOW-UP Voted differently			
Watched a treatment video	-0.0262		-0.0276		0.0119		0.00715		-0.0586*		-0.0586*		-0.0285		-0.0230	
	(-0.864)		(-0.896)		(0.414)		(0.255)		(-1.778)		(-1.755)		(-0.737)		(-0.589)	
T1: watched information video w/out encouragement		-0.0372		-0.0388		0.0167		0.00866		-0.0827**		-0.0827**		-0.0229		-0.0166
		(-1.144)		(-1.171)		(0.543)		(0.290)		(-2.336)		(-2.307)		(-0.490)		(-0.349)
T2: watched information video w/ encouragement		-0.0132		-0.0143		0.00628		0.00536		-0.0304		-0.0303		-0.0353		-0.0307
		(-0.410)		(-0.441)		(0.187)		(0.164)		(-0.808)		(-0.803)		(-0.844)		(-0.739)
Age		-0.000272		-0.000327		-0.00106		-0.00105		-0.000917		-0.00104		-0.00206		-0.00201
		(-0.312)		(-0.372)		(-1.086)		(-1.085)		(-0.940)		(-1.076)		(-1.498)		(-1.441)
Gender: 1 = Female		-0.0344		-0.0357		-0.0426		-0.0424		-0.0240		-0.0266		0.0370		0.0374
		(-1.099)		(-1.139)		(-1.074)		(-1.071)		(-0.561)		(-0.622)		(0.653)		(0.658)
Education		0.000374		0.000398		0.00782		0.00782		-0.00367		-0.00358		-0.0237***		-0.0236***
		(0.0749)		(0.0796)		(1.204)		(1.203)		(-0.593)		(-0.581)		(-3.186)		(-3.158)
Common citizen		0.000786		0.000175		-0.0823***		-0.0822***		-0.0977***		-0.0989***		-0.0608		-0.0606
		(0.0279)		(0.00624)		(-2.827)		(-2.827)		(-3.037)		(-3.042)		(-1.399)		(-1.392)
HH living conditions		0.0188*		0.0192*		0.0262**		0.0261**		0.00652		0.00748		0.00613		0.00581
		(1.786)		(1.825)		(2.321)		(2.292)		(0.519)		(0.605)		(0.356)		(0.335)
Political interest		0.0152*		0.0149*		0.0312***		0.0313***		0.00260		0.00183		0.00928		0.00949
		(1.841)		(1.807)		(3.844)		(3.864)		(0.285)		(0.204)		(0.776)		(0.790)
Mainly urban		0.0209		0.0211		-0.0582**		-0.0582**		-0.0400		-0.0391		-0.00665		-0.00687
		(0.924)		(0.937)		(-2.268)		(-2.263)		(-1.232)		(-1.216)		(-0.184)		(-0.190)
Field experiment T1		0.0266		0.0265		0.0218		0.0218		0.0777**		0.0770**		0.158***		0.158***
		(0.869)		(0.871)		(0.663)		(0.662)		(2.118)		(2.117)		(3.380)		(3.381)
Field experiment T2		0.0413		0.0413		0.0487		0.0487		0.0824**		0.0820**		0.181***		0.181***
		(1.419)		(1.424)		(1.385)		(1.384)		(2.284)		(2.301)		(3.487)		(3.484)
Field experiment T3 (=T1+T2)		0.0153		0.0154		0.0223		0.0223		0.0968***		0.0964***		0.0858*		0.0865*
		(0.447)		(0.456)		(0.564)		(0.564)		(2.648)		(2.661)		(1.768)		(1.771)
Observations	920	920	916	916	917	917	913	913	915	915	911	911	796	796	792	792
R-squared	0.017	0.018	0.032	0.033	0.023	0.024	0.080	0.080	0.020	0.023	0.043	0.046	0.041	0.041	0.073	0.073

Note: OLS estimates. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A9c
FOLLOW-UP Action index including all 8 action variables OLS.

	(1)	(2)	(3)	(4)
Watched a treatment video	-0.0619		-0.0697	
	(-1.174)		(-1.366)	
T1: watched information video w/out encouragement		-0.0632		-0.0650
		(-1.042)		(-1.106)
T2: watched information video w/ encouragement		-0.0604		-0.0754
		(-1.116)		(-1.433)
Age			-0.00185	-0.00181
			(-0.956)	(-0.931)
Gender: 1 = Female			-0.0366	-0.0363
			(-0.563)	(-0.558)
Education			0.00545	0.00552
			(0.564)	(0.571)
Common citizen			-0.226***	-0.226***
			(-4.312)	(-4.310)
HH living conditions			0.00758	0.00735
			(0.354)	(0.343)
Political interest			0.0411***	0.0413***
			(2.700)	(2.712)
Mainly urban			-0.0988*	-0.0990*
			(-1.859)	(-1.859)
Field experiment T1			0.168**	0.169**
			(2.315)	(2.312)
Field experiment T2			0.137**	0.137**
			(2.049)	(2.045)
Field experiment T3 (=T1 + T2)			0.103	0.104
			(1.593)	(1.583)
Observations	782	782	778	778
R-squared	0.031	0.031	0.091	0.091

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A10

Heterogeneous effects in oil and mining districts: Satisfaction with current handling of oil and gas revenues and funded development projects in respondent's region (ABFA) OLS.

	(1)	(2)	(3)	(4)
	Satisfaction with revenue management	Satisfaction with revenue management	Satisfaction with ABFA projects	Satisfaction with ABFA projects
Watched a treatment video	1.173*** (13.37)		0.743*** (8.074)	
T1: watched information video w/out role models		1.242*** (13.33)		0.797*** (8.291)
T2: watched information video w/ role models		1.093*** (11.25)		0.679*** (6.549)
Oil or mining district: Yes = 1	-0.0542 (-0.380)	-0.0517 (-0.364)	-0.0222 (-0.113)	-0.0189 (-0.0960)
HE: Interaction terms				
Any treatment x Oil or mining district	0.206 (1.311)		0.217 (1.149)	
T1 x Oil or mining district		0.0645 (0.384)		0.0859 (0.398)
T2 x Oil or mining district		0.373** (2.087)		0.372* (1.950)
Age	-0.000380 (-0.140)	-0.000457 (-0.169)	-0.00356 (-1.313)	-0.00365 (-1.346)
Gender: 1 = Female	0.0304 (0.327)	0.0341 (0.365)	0.211** (2.184)	0.213** (2.202)
Education	-0.0668*** (-4.897)	-0.0662*** (-4.879)	-0.0557*** (-3.606)	-0.0552*** (-3.579)
Common citizen	0.113 (1.347)	0.107 (1.263)	0.127 (1.432)	0.122 (1.373)
HH living conditions	-0.00514 (-0.160)	-0.00447 (-0.140)	0.0288 (0.966)	0.0296 (0.990)
Political interest	-0.0187 (-0.866)	-0.0185 (-0.855)	-0.00393 (-0.175)	-0.00379 (-0.169)
Mainly urban	-0.214*** (-3.505)	-0.220*** (-3.630)	-0.121* (-1.871)	-0.127* (-1.957)
Field experiment T1	0.0596 (0.770)	0.0598 (0.777)	0.0955 (0.930)	0.0954 (0.930)
Field experiment T2	-0.0305 (-0.361)	-0.0325 (-0.392)	-0.0308 (-0.273)	-0.0320 (-0.284)
Field experiment T3 (=T1 + T2)	0.182* (1.905)	0.182* (1.945)	0.100 (0.913)	0.100 (0.920)
Observations	2,171	2,171	2,115	2,115
R-squared	0.173	0.175	0.118	0.119

Note: OLS estimations. All specifications include region dummies and constant term (not shown). Standard errors clustered at district level. Robust t-statistics in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

Appendix B: Video transcripts

Placebo video [with supporting slideshow].

Ghana is located on the West Coast of Africa. The country is divided into ten administrative regions and 216 districts. Accra is the capital city and is located in the Greater Accra Region.

Ghana's population is currently estimated at 28.6 million.

Approximately 51 percent of the Ghanaian population is female, while 49 percent is male.

There are nine main ethnic groups in Ghana, with Akans being in the majority and accounting for approximately 48 percent of the total population. Other ethnic groups are the Moles, Ewes, Guans, and the Grusis.

English is the official language. However, there are over 80 different dialects spoken in Ghana, with Akan spoken by over 40 percent of the population.

Christianity – 71.2 percent – and Islam – 17.6 percent – are the two most dominant religions in the country.

Interesting tourist destinations include the Kakum National Park, the Mole National Park, Cape Coast and Osu Castles, and the Nzulezu Stilt Village.

Thanks for watching.

Treatment videos.

Part 1 [with supporting slideshow]: T1 and T2.

Ghana has been producing oil and gas in commercial quantities since November 2010 from the Jubilee and TEN Fields located in its offshore sedimentary basin.

Approximately 195 million barrels of oil have been produced between 2010 and 2016. These have been shared between Ghana and oil production partners including Tullow, Kosmos, and Anadarko.

Ghana has received 8.49 billion Ghana cedis from the sale of its share of the crude oil so far, as well as profits from taxes and surface rentals paid by international oil companies.

Ghana's share of oil money received has been distributed to four main areas. 44 % allocated to the Annual Budget Funding Amount to

support the annual budget; 30 % given to Ghana National Petroleum Corporation (GNPC) to pay for its participation in oil production and exploration, 18 % in the Ghana Stabilisation Fund, and 8 % for the Ghana Heritage Fund.

The Petroleum Revenue Management Act (PRMA), 2011 (Act 815) requires that the ABFA should not be spent on more than four priority areas at every point in time. Between 2011 and 2016, roads and other infrastructure, agriculture modernisation, repayment of loans and expenditure on oil and gas and capacity building were the priority areas.

Out of 3.31 billion cedis that have been allocated to the ABFA, 48 % has been spent on roads and other Infrastructure, 26 % has been used to repay oil-related loans; 11 % to build human and institutional capacity in different sectors of the economy; 11 % to modernise agriculture, 8 % put in the Ghana Infrastructure Investment Fund; and the Public Interest and Accountability Committee (PIAC) received 0.03 %.

The ABFA has been used to support projects in all the 10 regions. The Western Region has received the largest share of the ABFA, totalling 254.02 Ghana cedis million, while the Upper West Region has received the least amount of 34.62 million Ghana cedis between 2011 and 2016.

The Upper West Region has received 34.62 million Ghana cedis from the ABFA supporting projects in 5 different sectors. These include energy and road and highway sectors.

The Upper East Region has so far received 60.71 million Ghana cedis, which have supported projects in 6 sectors of the economy including agriculture, energy and roads and highways.

Total of 36.18 million Ghana cedis of the ABFA went to the Northern Region supporting projects mainly in roads and highways sector as well as energy sector.

The Brong-Ahafo Region has received 64.16 million Ghana cedis of ABFA money; 93 % of which has gone to the roads and highway sector, with the remainder going to the education, water and agricultural sectors.

163.51 million Ghana cedis from the ABFA went to the Ashanti Region, covering the roads and highways sector, market infrastructure and projects in educational sector.

The Eastern Region received 162.69 million Ghana cedis from the ABFA, and was used to fund projects in the roads and highways sector as well as the agriculture and educational sectors.

The Volta Region received 171.58 million Ghana cedis of ABFA funds, and was used to support projects in roads and highways sector, building water infrastructure, and supporting projects in the agriculture and educational sectors.

A total of 254.10 million Ghana cedis of the ABFA went to the Western Region, which were used for water sector development, roads and highways, agriculture, railway and energy sector projects.

The Central Region received 66.79 million Ghana cedis of the ABFA, of which 40 % was spent on prison infrastructure, 34 % on roads and highways, 11 % to the Central Regional Development Commission (CEDECOM), and 5 % each going to the agriculture and water sectors.

Last but not least, the Greater Accra Region received 226.39 million Ghana cedis of the ABFA, which were spent on roads and highways, agriculture and water, and railway infrastructure.

Part 2 [encouragement message]: only T2.

Introduction Slide: So, why is it important for citizens to know how oil and gas revenues are being utilised? Let's listen to what key stakeholders have to say.

Hon. George Mireku Duker, MP for Tarkwa-Nsuaem Constituency.

Transparency is very key in ensuring that we properly use our oil resources in our communities and in this country, and that for that matter, as a legislator, I need to ensure that proper records are kept. And that's why we're having a Public Interest and Accountability Committee, which is supposed to give about twice in each year a report that they collect in respect to the utilisation of the oil resources. Of course, we just received, as Members of Parliament – we just received a report of 2016, and I just had a copy in my pigeonhole. I'm still going through it. I need to get back to my constituency; brief them as to how our oil money is being used. And, it's important that our people get to know how these resources are utilised by our leaders, and we will ensure that they will do so.

Emmanuel Kuyole, Executive Director, Centre for Extractives and Development, Africa.

So, it's very important for citizens to have right, adequate and timely, and of course, verifiable information on the use of oil revenues because that is what governments are meant to do: they are meant to collect the revenues, and spend the revenues to improve the life of people, by constructing roads, schools, hospitals, and things like that. But you, the citizens, you live in the communities: you use the roads; your children go to the schools; and you go to the clinics and the hospitals! So you need to have this information to make sure that these projects are there! And if they are not there, or if they are not in the quality that they are supposed to be, you can hold government to account! That is what our democracy is about.

Part 3 [with one supporting slide]: T1 and T2.

If you want more information on oil and gas revenues and how they are being spent in Ghana, you may contact any of the following:

1. Your Member of Parliament
2. Public Interest and Accountability Committee on 0302 242,006 or via their website <https://www.piacghana.org>
3. Kumasi Institute of Technology and Environment (KITE) on 0302 256,800 or 0302 256,801

Thanks for watching.

Appendix C. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.worlddev.2024.106813>.

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