SUPPLEMENTARY MATERIAL

FOREIGN AID AND STATE LEGITIMACY
Evidence on Chinese and US Aid to Africa from Surveys, Survey Experiments, and Behavioral Games

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APPENDIX

A WITHIN-COUNTRY ANALYSIS

A.1 RANDOM WALK TECHNIQUE

Survey respondents were sampled using the random walk technique. A team of Liberian enumerators walked the length of each community (in the rural sample) or neighborhood (in the urban sample) and divided it into roughly equal blocks. They then counted all houses along the "major pathways" separating those blocks, and selected households at even intervals along the major pathways. Respondents were selected at random from among the consenting adult members of each household.

A.2 DESCRIPTIVE STATISTICS

Table A.1 provides descriptive statistics on exposure to foreign aid and perceptions of government in Liberia. The first three columns report descriptive statistics for the rural survey sample, the last three for the urban survey sample. (We did not measure these variables in the tax compliance game sample.)

A.3 REPRESENTATIVENESS

REPRESENTATIVENESS OF URBAN SURVEY SAMPLE

While the respondents in our urban survey are broadly representative of the population of Gbarnga, the second largest city in Liberia according to the 2008 census, we cannot say for certain how representative Gbarnga is of other cities in Liberia. However, comparison to a representative survey of Monrovia conducted around the same time (Blair, Morse and Tsai 2017) suggests that our sample is not atypical. Table A.2 compares our sample to the sample in Blair, Morse and Tsai (2017) along a variety of covariates for which we have data from both surveys. In general, the samples are comparable. The only stark difference is the proportion of respondents in our sample who

are farmers: 15%, compared to 1% in Monrovia. This is unsurprising given that the agricultural sector is much smaller in Monrovia than anywhere else in the country. With this exception, the two samples appear to be similar. We interpret these similarities to suggest that our results may be generalizable to other urban areas of Liberia.

REPRESENTATIVENESS OF RURAL SURVEY SAMPLE

While the respondents in our rural survey are broadly representative of the 38 communities from which they were sampled, those 38 communities are not representative of Liberia, nor of the counties in which they are located. As discussed in the paper, eligibility for the survey was restricted to communities located near a usable road and with at least 500 residents. While this may limit the external validity of our results, comparison to a nationally representative survey conducted several years earlier (Vinck, Pham and Kreutzer 2011) suggests that our sample is not atypical for Liberia. Table A.3 compares our sample to the sample in Vinck, Pham and Kreutzer (2011) along a variety of covariates for which we have data from both surveys. The samples are comparable, with a few exceptions: our respondents were more likely to be Christian in Bong county, and less likely to be Christian in Nimba relative to respondents in Vinck, Pham and Kreutzer (2011). They were also more likely to have at least some education in all three counties, but less likely to have secondary education. Perhaps not coincidentally, they were also less likely to be literate. Overall, however, the two samples are similar along most covariates for which we have data. We interpret these parallels to suggest that our results may be generalizable to other rural regions of Liberia.

A.4 BALANCE

Tables A.4, A.5, and A.6 report balance tests for the rural survey experiment, urban survey experiment, and tax compliance game, respectively. While we observe some incidental imbalance on individual covariates, they are not jointly significant predictors of treatment assignment. Specifically, we observe some incidental imbalance on gender, education, and household wealth in the urban survey experiment, with respondents in the government treatment group wealthier and more

likely to be female, respondents in the China treatment group less educated and more likely to be male, and respondents in the US treatment group poorer and less educated. But these controls are not jointly significant predictors of treatment assignment in the urban (or rural) survey experiment. We also observe some incidental imbalance on age in the tax compliance game, with control group participants older than participants in the other treatment groups. But again, our controls are not jointly significant predictors of treatment assignment. Nonetheless, to increase precision and mitigate any biases from incidental imbalance, we include all controls in all analyses.

A.5 Measurement error

Our within-country analysis relies on survey self-reports to operationalize exposure to Chinese and US aid; our cross-country analysis uses relies on AidData and AIMS data instead. How reliable are these proxies? As a plausibility probe, Table A.7 reports the correlation between our survey-based measures of exposure to Chinese aid in Liberia and the proximity of each community in our sample to the nearest planned or completed Chinese project in the AidData dataset. If these proxies are reliable, then our survey-based measures should be positively correlated with proximity to the nearest completed project, but not with proximity to the nearest planned project. (Intuitively we would not expect respondents to be any more likely to have worked for Chinese companies, to know people who have worked for Chinese companies, or to have used the services China provides in locations where projects are planned but have not yet been implemented.)

The dependent variable in the first column of Table A.7 is an additive index of four dummies capturing four different types of exposure to Chinese projects; the dependent variables in the remaining columns are two dummies disaggregating exposure into users of Chinese-funded projects and workers for Chinese-funded contractors. To avoid post-treatment bias, we only control for individual-level characteristics that are either fixed over time or are extremely unlikely to be affected by exposure to Chinese aid.[86] We draw on a 2004 Rapid Needs Assessment conducted by the UN Office for the Coordination of Humanitarian Affairs as a source of additional community-

[86] We control for age, gender, and religion at the individual level.

level controls.[87] Standard errors are clustered by community.[88] Proximity is measured in units of 10km, with larger values indicating closer proximity.

Three caveats are warranted. First, because none of our sample communities is located within 30km of a planned Chinese project, we opt to use continuous measures of proximity rather than binary ones. Second, because our urban respondents all live in the same city (Gbarnga) and therefore within more or less the same distance of the nearest Chinese project, we conduct this plausibility probe using our rural sample alone. Finally, because we do not have AIMS data on US aid in Liberia, we focus on exposure to Chinese aid only. With these caveats in mind, we find that self-reported exposure to Chinese projects in rural Liberia is strongly positively correlated with proximity to the nearest completed Chinese project in the AidData dataset. In contrast, the correlation between self-reported exposure and the nearest planned Chinese project is zero or even negative. These results suggest that our proxies are indeed capturing exposure to Chinese aid in an empirically meaningful way.

A.6 *Ex post* POWER CALCULATIONS

We discuss the results of *ex ante* power calculations in the paper, showing that lack of statistical power is unlikely to explain our null findings. While *ex post* power calculations should be interpreted with caution,[89] they similarly suggest that lack of statistical power is unlikely to explain our nulls. To detect the actual difference we observed between the control and China treatment group in our behavioral game, we would have needed a sample of approximately 32,000 participants—more than half the population of Gbarnga (57,000) according to the 2008 census. The actual difference in tax morale between the control and China treatment groups in the urban survey experiment is

[87] At the community level we control for number of households in the community, dummies indicating whether there are any schools or health clinics in the community, a dummy indicating whether the community is accessible by road in the rainy season, and an estimate for the proportion of residents of each community that were disabled during the Liberian civil war. Since the first Chinese-funded project in AidData's Liberia dataset was planned after 2004, these controls should not induce post-treatment bias.

[88] Because the regressions in columns 2 and 3 are linear probability models, we use robust cluster standard errors to correct for heteroskedasticity. And because distance to the nearest Chinese project is highly correlated with the district in which each community is located, we omit district fixed effects from these regressions.

[89] *Ex post* power calculations remain controversial. For an argument in favor of them, see Bababekov et al. (2018). For an argument against, see Gelman and Carlin (2014).

very close to zero, and we could not have detected it even with millions of respondents. To detect the actual difference in tax morale between the control and China treatment groups in the rural survey experiment, we would have needed a sample of over 3,000 respondents. This is nearly two-thirds the sample needed to conduct a nationally representative survey (Vinck, Pham and Kreutzer 2011), applied in our case to just 38 rural communities across three of Liberia's 15 counties.

A.7 Foreign aid and state legitimacy in Liberia using AidData

The observational component of our within-country analysis in the paper uses survey self-reports to operationalize exposure to Chinese and US aid in Liberia. These measures may be susceptible to non-random recall. As a robustness check, in Table A.9 we replicate our analysis using AidData to operationalize exposure to Chinese aid. As with the analysis in Appendix A.5, we use continuous rather than binary measures of exposure, exclude the urban sample, and focus on exposure to Chinese aid alone. After differencing away selection effects, we find that Chinese aid in Liberia improves citizens' perceptions of government, strengthens their belief in the quality of democracy, and weakens their belief in the ease of tax evasion. These results are similar to those in the paper; if anything they are even more positive. Regardless of the approach we take to measuring Chinese aid in Liberia, our results suggest that its effects on state legitimacy are benign or even beneficial.

A.8 Survey experiment vignettes

Government treatment group

Before we finish I want to tell you a little bit about how public services are provided in Liberia. Public services include things like roads and clinics and electricity. These are things that benefit all of us here in Liberia. Providing public services is one important role for government. The government has provided many public services to Liberians, including roads, bridges, schools, hospitals and clinics, especially during the Ebola epidemic.

The government collects taxes from Liberians to do these things. Government can only

provide public services if we pay our taxes. The government uses the taxes it collects to fund expensive public services that can be difficult for communities to provide for themselves, like new roads, new hospitals, and new schools.

But the government can also do some bad things. Sometimes government can spend money wastefully. For example it may pay companies that aren't very good at road building to build our roads. That's one reason our roads can get spoiled so quickly. Or government may hire companies that do not pay fair wages to Liberian workers. They may make them work long hours with little pay. And they may treat them badly or threaten them if they complain. Or government officials or contractors may eat the money.

Overall, as a citizen it is valuable to think about the importance and challenges of building and maintaining public services. And it is valuable to think about what we can do to make sure public services are provided fairly, effectively and efficiently. Now that we have talked about how public services are provided in Liberia, I want to ask you a few last questions.

CHINA / USA TREATMENT GROUPS

Before we finish I want to tell you a little bit about how public services are provided in Liberia. Public services include things like roads and clinics and electricity. These are things that benefit all of us here in Liberia. Providing public services is one important role for foreign donors and investors.

One country that gives a lot of foreign aid and investment to Liberia is [China / America]. [China / America] gives many millions of dollars to help provide public services. [Chinese / American] companies and organizations also help build and maintain public services themselves. [China / America] provides many public services to Liberia, including roads, schools, hospitals and clinics, especially during Ebola. [China / America] does not collect taxes from Liberians to do these things. [China / America] can provide services even if we don't pay our taxes. [China / America] uses its own money to fund expensive public services that can be difficult for communities to provide for themselves, like new roads, new hospitals, and new schools.

But [China / America] can also do some bad things. Sometimes [China / America] can spend money wastefully. For example it may pay companies that aren't very good at road building to build our roads. That's one reason our roads can get spoiled so quickly. Or [China / America] may hire companies that do not pay fair wages to Liberian workers. They may make them work long hours with little pay. And they may treat them badly or threaten them if they complain. Or [Chinese / American] officials or contractors may eat the money.

Overall, as a citizen it is valuable to think about the importance and challenges of building and maintaining public services. And it is valuable to think about what we can do to make sure public services are provided fairly, effectively and efficiently. Now that we have talked about how public services are provided in Liberia, I want to ask you a few last questions.

A.9 Survey experiment heterogeneous treatment effects

Using survey experiments in rural and urban Liberia, we find that vignettes about Chinese and US aid provision do not erode and may in fact reinforce citizens' tax morale. As a robustness check, here we explore whether these nulls are consistent across some of the most important subgroups in Liberia. In Figure A.1 we test for heterogeneous treatment effects (HTEs) by tribe by interacting our treatment indicator with dummies for the three most populous tribes in the three counties in our sample: Kpelles, Manos, and Lormas. In Figure A.2 we test for heterogeneity by exposure to civil war violence by interacting treatment with an additive index of four different types of victimization. Specifically, we ask respondents (1) whether they or someone in their family was beaten or hurt during the civil war; (2) whether they witnessed someone being beaten or killed; (3) whether someone in their family was killed during the civil war; and (4) whether any of their property was destroyed. We code responses to these questions as dummies, then add the dummies into an index ranging from 0 to 4. Finally, in Figure A.3 we test for heterogeneity by prior opposition to the government by interacting treatment with a dummy for whether respondents voted for one of the opposition parties in Liberia's 2011 presidential election.

Two caveats are warranted. First, because we only have data on these subgroups in our rural

survey sample, we restrict our HTE analysis to the rural survey experiment. Second, because these HTE analyses were not pre-specified, they should be interpreted with some caution. With these caveats in mind, we find little evidence to suggest that our nulls are specific to particular subgroups. The results of our HTE analyses are almost uniformly null, with one exception: from Figure A.3, opposition party voters tended to perceive less of an obligation to pay taxes when assigned to hear a vignette about US service provision. One possible explanation for this result is that opposition voters viewed the administration of incumbent President Ellen Johnson Sirleaf as too closely tied to the US. Being reminded of the US's role in service provision may have reinforced this belief, resulting in lower levels of tax morale. But again, we interpret this result with caution. Regardless, taken together, our HTE analyses confirm that priming respondents to think about the role of donors in service provision does not diminish tax morale—a null that holds across some of the most important subgroups in Liberia.

A.10 Tax compliance game schematic

The schematic in Figure A.4 depicts the structure of the tax compliance game. We reproduce the game protocol in full in Appendix A.11 below.

A.11 Tax compliance game script

Consent

My name is [NAME #1], and this is [NAME #2]. We are working as researchers with Parley. Parley is an NGO here in Liberia. Today we are doing small work to understand the way Liberians feel about each other and about different kinds of big people, like government and foreign donors. In this project you will learn about how public services like roads and schools and hospitals are provided in Liberia. For some of you this will be old information that you already know. For some of you it will be new. We hope it will be educative for everyone.

In this project you will also do some activities. In the activities you will earn some money.

The most you can earn is 400 LD. Not everyone will earn all 400 LD. The amount you earn will depend on what you do in the activities. These activities are **confidential and anonymous**. We have given each of you an ID number. We will only know you by that number. We will never take your name. I will not know the choices you make, and neither will anybody else in this community or anywhere else. No one will ever know the choices you make. Everything you do in these activities is for you yourself.

Your participation in this project is completely voluntary. The activities will last about 3 or 4 hours. If you know you cannot stay for all 3 or 4 hours, please let us know now so we can find someone to take your place. You can decide to withdraw from the project at any time, but to earn your money you must stay for all 3 or 4 hours. This is very important for us, because all the activities are connected to each other.

If you have any questions or concerns, you can contact our bossman, [NAME], or the executive director of Parley, [NAME]. If you want to contact them I can give you their phone numbers at the end of all the activities.

Before we continue, does anyone have any questions?

[ANSWER ANY QUESTIONS]

If for any reason you don't feel fine about participating, you are free to go now.

[COMPLETE INFORMED CONSENT]

Before we begin, I beg you **please put your phones on silent**. Also, if you need to use the bathroom, please use it **now**. We need everyone to stay seated once the activity begins.

SURVEY

OK, to begin we want to ask you some small small questions about yourself and the community where you live. We will give each of you a copy of this survey. [SHOW SURVEY] I will read each question out loud. You will follow along with me and fill in the answer that is right for you. We will walk around to help you if you don't understand any question, but **please don't show your answers to your neighbors**. Also, **please answer all the questions**. Don't leave any of them

empty.

[DISTRIBUTE SURVEYS]

Please write the name of your home community at the top of the first page, next to where your ID number is. Your home community, that the place you living in now.

[COMPLETE SURVEYS]

Everybody please check to make sure you answered all the questions. If you missed any questions, please answer them now.

[COLLECT SURVEYS]

INSTRUCTIONS

Now I will explain the rules of the activity. I will explain the rules first, then we will practice the activity three times. The best way to understand the rules is to practice. So you will really understand the rules before the activity begins.

Even though there are other people in the room with you, this is an **individual activity**. All your decisions are your own, and the money you make will depend on **your own decisions**. The decisions that other people make will not affect you at all.

To begin the activity, you will pick a small envelope from the big envelope beside you. Inside the small envelope you will find some fake money. We use fake money to make the activities go faster. When the activities are over we will give you real money in exchange for your fake money. So you should treat that fake money like it is real. You have earned this money by taking time out of your day to participate in these activities. The money is not a gift. It is your income for the day.

In every round of the activity you will pick a new envelope. Every envelope will have a different amount of money in it. Some may have 200 LD. Some may have 50 LD. Some may even have no money at all. **Only you will know how much money is in the envelope you pick**. Your income is your secret. You also have beside you a plastic box. This is your Bank Account. Any income you earn, you will put it in your Bank Account. Nobody can see into the plastic box, so nobody can know how much income you earn.

Does anybody have any questions so far?

[ANSWER ANY QUESTIONS]

Just like in real life, you must report the income you earn to the government. You will report your income on this Income Reporting Sheet. You will get a new sheet for every round of the activity. The sheet will be in the same small envelope as the money.

Also just like in real life, you must pay taxes on the income you report. **These taxes are not pretend**. At the end of the activity we will give all the taxes we collect to the government. So even though the activity is fun, it is not really a game. The tax rate for this activity is 25%. That means that for every 100 LD you report, the government will take 25 LD and you will keep 75 LD for yourself.

Also just like in real life, the government will not know how much income you earn. That means you must decide whether to report **all** of your income, **some** of your income, or **none** of your income. The more income you report, the more the government will take from you in taxes.

Does anybody have any questions so far?

[ANSWER ANY QUESTIONS]

Like I said before, the government will not know how much income you earn. But just like in real life, the government can decide to investigate you to find out. If the government decides to investigate you, it will compare the income you earned to the income you reported. If the government finds out that you earned more than you reported, it will punish you with a fine of **100 LD**. It will also tax you on **all** the income you earned, including the income you didn't report.

Also just like in real life, the government will not investigate everybody. After every round of the activity you will pick a bean from this bag. That bean will tell you if you will be investigated or not. If you pick a **black bean**, that means you will be investigated. If you pick a **white bean**, that means you will not be investigated. There are **18 white beans** in the bag, but only **2 black beans**. That means the chance you will be investigated is 10%, or 1 in 10.

Does anybody have any questions so far?

[ANSWER ANY QUESTIONS]

EXAMPLE #1

Each of you has a sheet of paper with some examples to help you understand the rules of the activity. Follow along with me as I read you the examples. In the **first** example we have a participant called Flomo. Flomo earns 100 LD in one round of the activity. In this example Flomo picks a white bean, so the government will not investigate him. That means Flomo will only pay taxes on the income he reports:

- Let's say Flomo reports all 100 LD. Then the government will take 25 LD, and Flomo will keep 75 LD. That's 100 LD minus the 25 LD the government took.
- Now let's say Flomo reports 80 LD. The government will take 20 LD, and Flomo will keep 80 LD. That's 100 LD minus the 20 LD the government took.
- Next let's say Flomo reports 60 LD. The government will take 15 LD, and Flomo will keep 85 LD. That's 100 minus the 15 LD the government took.
- Next let's say Flomo reports 40 LD. The government will take 10 LD, and Flomo will keep 90 LD. That's 100 minus the 10 LD the government took.
- Next let's say Flomo reports 20 LD. The government will take 5 LD, and Flomo will keep 95 LD. That's 100 minus the 5 LD the government took.
- Finally, let's say Flomo reports that he didn't earn anything. The government will not take anything, and Flomo will keep all 100 LD.

Does anybody have any questions about this first example?

[ANSWER ANY QUESTIONS]

EXAMPLE #2

In the **second** example we have a participant called Sekou. Sekou earns 180 LD in one round of the activity. In this example Sekou picks a black bean, so the government will investigate him. That

means Sekou will pay taxes on **all** his income. He will also pay a fine of 100 LD on any income he doesn't report:

- Let's say Sekou reports all 180 LD. Then the government will take 45 LD, and Sekou will keep 135 LD. That's 180 LD minus the 45 LD the government took. Since Sekou reported all his income, he will not pay any fine.

- Now let's say Sekou reports 140 LD. The government will investigate him and see that he actually earned 180 LD. So the government will still take the same 45 LD in taxes. And since Sekou did not report all his income, he will also pay a fine of 100 LD. So the government will take 145 LD, and Sekou will keep 35 LD.

- Next let's say Sekou reports 80 LD. The government will investigate him and see that he actually earned 180 LD. So the government will still take the same 45 LD in taxes. And since Sekou did not report all his income, he will also pay a fine of 100 LD. So the government will take 145 LD, and Sekou will keep 35 LD.

- Finally, let's say Sekou reports that he didn't earn anything. The government will investigate him and see that he actually earned 180 LD. So the government will still take the same 45 LD in taxes. And since Sekou did not report all his income, he will also pay a fine of 100 LD. So the government will take 145 LD, and Sekou will keep 35 LD.

Does anybody have any questions about this second example?

[ANSWER ANY QUESTIONS]

EXAMPLE #3

In the **third** example we have another participant called Rebecca. Rebecca earns 250 LD in one round of the activity. In this example Rebecca picks a white bean, so the government will not investigate her. That means Rebecca will only pay taxes on the income she reports:

- Let's say Rebecca reports all 250 LD on her Income Reporting Sheet. Then the government will take 62.5 LD, and Rebecca will keep 187.5 LD. That's 250 LD minus the 62.5 LD the government took. Now, obviously there is no such thing as 187.5 LD. We will round Rebecca's income up until it can be divided evenly into 5 LD bills. So instead of 187.5 LD, Rebecca will keep 190 LD.

- Now let's say Rebecca reports 200 LD. The government will take 50 LD, and Rebecca will keep 200 LD. That's 250 LD minus the 50 LD the government took.

- Next let's say Rebecca reports 120 LD. The government will take 30 LD, and Rebecca will keep 220 LD. That's 250 minus the 30 LD the government took.

- Next let's say Rebecca reports 100 LD. The government will take 25 LD, and Rebecca will keep 225 LD. That's 250 minus the 25 LD the government took.

- Next let's say Rebecca reports 60 LD. The government will take 15 LD, and Rebecca will keep 235 LD. That's 250 minus the 15 LD the government took.

- Finally, let's say Rebecca reports that she didn't earn anything. The government will not take anything, and Rebecca will keep all 250 LD.

Does anybody have any questions about this **third** example?

[ANSWER ANY QUESTIONS]

These are just examples. Maybe the activity sounds complicated, but really it is simple. In every round of the activity you will pick a new envelope with a new amount of money in it. That is your income. Only you will know how much income you earn.

In every round of the activity you will decide again how much of your income you want to report. And in every round you will pick a new bean to see if the government will investigate you. If you pick a white bean, then the government will not investigate you. That means you will only pay taxes on the income you report. You will not pay taxes on the income you don't report.

If you pick a black bean, the government will investigate you. That means you will pay taxes on all your income, including the income you don't report. You will also pay a fine of 100 LD on any income you don't report. For every 1 black bean there are 9 white beans. So the probability the government will investigate you is 10%, or 1 in 10.

The activity will continue for a number of rounds. After all the rounds are finished, you will trade the fake LD you earned for real LD. We will subtract any taxes you owe. We will also subtract any fines you owe. The income you earn after taxes and fines will be yours to keep.

Does anybody have any questions before we practice?

[ANSWER ANY QUESTIONS]

PRACTICE ROUND #1

Now we will practice the activity for three rounds to make sure everyone understands. This is just practice. You will not earn any real money in these three rounds. **You can ask questions at any time during this example. If anything is unclear, please just ask and I will explain**.

To begin the first practice round, you will open the envelope that says "PRACTICE." You will pick a small envelope from inside there. You can pick any envelope you want. Now open the envelope and count the money. Once you have counted it, put the money back in the envelope. Now take the Income Reporting Sheet out of the envelope and decide how much of your income you want to report.

Remember, you can report any amount you want. But please do not report **more** income than you actually earned. For example, if you earn 70 LD, you can report 0 LD, 5 LD, 10 LD, 15 LD, 20 LD, all the way up to 50LD, 55 LD, 60 LD, 65 LD, 70 LD. You can report all of it, you can report none of it, or you can report any amount between all and nothing. That one is your secret. But you should not report more than 70 LD if you only earned 70 LD. How much you decide to report, write that number down on the Income Reporting Sheet. Then fold the Income Reporting Sheet in half so we cannot see what you wrote on it.

To see who will be investigated, you will pick a bean from this bag. If you pick a **black**

bean, that means you will be investigated. You will put your Income Reporting Sheet back in the envelope. Then you will give the envelope back to us. Then we will give it to the government to see how much income you really earned. If you pick a **white bean**, that means you will **not** be investigated. You will take the income you earned out of the envelope and put it in your Bank Account. Then you will give me your Income Reporting Sheet, and you will put the empty envelope on the floor next to you. Please don't show the other participants which bean you picked. That one is your secret.

[COMPLETE PRACTICE ROUND #1]

So now you have seen how the activity works. Does anyone have any questions?

[ANSWER ANY QUESTIONS]

PRACTICE ROUND #2

Now we will practice again. To begin the second practice round, you will again open the envelope that says "PRACTICE." You will pick a small envelope from inside there. Now open the envelope and count the money. Once you have counted it, put the money back in the envelope. Now take the Income Reporting Sheet out of the envelope and decide how much of your income you want to report.

Remember, you can report any amount you want. You can report all of it, you can report none of it, or you can report any amount between all and nothing. That one is your secret. How much you decide to report, write that number down on the Income Reporting Sheet. Then fold the Income Reporting Sheet in half so we cannot see what you wrote on it. Only the government will see how much income you report.

To see who will get investigated, you will pick a bean from this bag. If you pick a **black bean**, that means you will be investigated. You will put your Income Reporting Sheet back in the envelope. Then you will give the envelope back to us. Then we will give it to the government to see how much income you really earned. If you pick a **white bean**, that means you will **not** be investigated. You will take the income you earned out of the envelope and put it in your Bank

Account. Then you will give me your Income Reporting Sheet, and you will put the empty envelope on the floor next to you. Remember, please don't show the other participants which bean you picked. That one is your secret.

[COMPLETE PRACTICE ROUND #2]

So now you have seen how the activity works again. Does anyone have any questions?

[ANSWER ANY QUESTIONS]

PRACTICE ROUND #3

Now we will practice one last time. To begin the last practice round, you will again open the envelope that says "PRACTICE." You will pick the remaining small envelope from inside there. Now open the envelope and count the money. Once you have counted it, put the money back in the envelope. Now take the Income Reporting Sheet out of the envelope and decide how much of your income you want to report. Remember, you can report any amount you want. How much you decide to report, write that number down on the Income Reporting Sheet. Then fold the Income Reporting Sheet in half so we cannot see what you wrote on it. To see who will get investigated, you will pick a bean from this bag.

[COMPLETE PRACTICE ROUND #3]

So now you have seen how the activity works again. Does anyone have any questions?

[ANSWER ANY QUESTIONS]

VIGNETTE

NB: Please see tax compliance game vignettes in Section A.12.

LIVE ROUNDS

OK, we are finished with our practice rounds, and we have talked about how public services are provided in Liberia. Does anyone have any questions before we go on to the real rounds? Now, we

are about to start the real rounds, so you can please take the money out off your bank account and put it into the medium size envelope with the writing "Practice."

[ANSWER ANY QUESTIONS]

Now we will begin the **real rounds**. Remember, you will trade in the fake money you earn for real money at the end of the day, so you should treat the fake money like it is real. To begin the first real round, you will open the large envelope that says "REAL." You will pick a small envelope from inside there. You can pick any envelope you want. Now open the envelope and count the money. Once you have counted it, put the money back in the envelope.

Now take the Income Reporting Sheet out of the envelope and decide how much of your income you want to report. **Remember, you can report any amount you want**. But please do not report **more** income than you actually earned. How much you decide to report, write that number down on the Income Reporting Sheet. Then fold the Income Reporting Sheet in half so we cannot see what you wrote on it.

To see who will get investigated, you will pick a bean from this bag. If you pick a **black bean**, that means you will be investigated. You will put your Income Reporting Sheet back in the envelope. Then you will give the envelope back to us. Then we will give it to the government to see how much income you really earned. If you pick a **white bean**, that means you will **not** be investigated. You will take the income you earned out of the envelope and put it in your Bank Account. Then you will give me your Income Reporting Sheet, and you will put the empty envelope on the floor next to you. Please don't show the other participants which bean you picked. That one is your secret.

[COMPLETE LIVE ROUND #1]

Now we will continue the activity for some more rounds. **Please do not pick your next envelope until I tell you to**.

[COMPLETE LIVE ROUND #2 THROUGH LIVE ROUND #10]

FOCUS GROUP

OK, that is the end of the activity. In the other room they are busy calculating how much income you earned today. Before they finish with their calculations, we want to ask you a few questions about what you thought about the activity.

We would like to record the conversation to help us remember what you say. We will record the conversation using this recorder. We will not take your names, and we will not share the recordings with anyone. Everything you say will remain anonymous and confidential. If for any reason you don't feel fine about me recording the conversation, you can please tell me now.

NB: Please see the tax compliance game focus group script in Section A.13.

DEBRIEF

Now that the activity is finished, we just want to remind you that paying your taxes is very important. The activity today was just to give you an educative experience about taxation and public services in Liberia, and to help us understand better how Liberians like yourself feel about different kinds of big people, like government. The activity was created as an educative experience by researchers at [UNIVERSITIES], from America.

In real life, the government is working hard to provide services to Liberian citizens. Sometimes the government faces challenges, but that is true of governments everywhere. Paying taxes in real life is not a game. It is essential to make sure the government can pay for public services that matter to you.

Do you have any questions about the activity?

Finally, before we go I want to ask if any of you already knew each other from before today. Maybe you were already friends with someone else in the room, or maybe you work together. Please raise your hand if you already knew someone else in the room from before today, and tell me the ID number of that person. **Please don't tell me their name.**

Thank you very much for participating in these activities today. We will give your money

now. **Please leave all the materials from the activities in the room here.** We need to reuse them. **Also, please do not tell anyone about these activities.** We will continue this project with other people for a few weeks. Please help us keep the activities secret so other people can participate too.

A.12 TAX COMPLIANCE GAME VIGNETTES

GOVERNMENT TREATMENT GROUP

Before we start the real rounds we want to tell you a little bit about how public services are provided in Liberia. Public services include things like roads and clinics and electricity. These are things that benefit all of us here in Liberia.

Let's first imagine two different communities. In the first community, there are no paved roads. Cars cannot pass in the rainy season. The closest hospital is several hours away. There is no electricity. There is no running water. People have to walk a long way to get water from the pump. There are no police or courts, which makes people feel insecure. Rogues run free. Rogues steal, hurt or even kill people.

Now imagine another community. In this second community, all the roads are paved. Cars can pass even in the rain. There is a hospital nearby. The hospital has the best doctors and the best equipment to treat malaria, Ebola and other diseases. There is electricity for everyone. There is running water, so people can get what they need to drink and cook without waiting in line at a pump. The police do good job, and the courts are quick to punish rogues. People feel secure.

I think we can all agree we would prefer to live in the second community, where there are lots of public services. People are healthier from the hospital. Transportation is cheaper and faster. It is safer. Probably there are even more jobs because public services make it easier for companies to operate. Life is better and easier for people in that community. We can all agree we like the imaginary community with all the public services. But how does a real community get to be like that?

It is not easy. In some places, citizens can provide some public services for themselves. Communities can organize to brush the roads, or to build clinics, or to maintain security. But in most places, it is too hard for citizens to provide all these public services on their own. For example, think about paving a road. First you have to shovel a lot of mud. Then you have to fill the road with gravel. And then you have to lay tarmac to pave the road. The process is expensive and slow.

This is why we have government. Providing public services is one important role for government. It is maybe even the most important role. The government has provided many public services to Liberians, including roads, bridges, schools, hospitals and clinics, especially during the Ebola epidemic. The government collects taxes from Liberians to do these things. Government can only provide public services if we pay our taxes. The government uses the taxes it collects to fund expensive public services that can be difficult for communities to provide for themselves, like new roads, new hospitals, and new schools. The government uses everyone's small contribution to make a big contribution. That makes us all better off.

But the government can also do some bad things. Sometimes government can spend money wastefully. For example it may pay companies that aren't very good at road building to build our roads. That's one reason our roads can get spoiled so quickly. Or government may hire companies that do not pay fair wages to Liberian workers. They may make them work long hours with little pay. And they may treat them badly or threaten them if they complain. Or government officials or contractors may eat the money.

Overall, as a citizen it is valuable to think about the importance and challenges of building and maintaining public services. And it is valuable to think about what we can do to make sure public services are provided fairly, effectively and efficiently.

CHINA / USA TREATMENT GROUPS

Before we start the real rounds we want to tell you a little bit about how public services are provided in Liberia. Public services include things like roads and clinics and electricity. These are things

that benefit all of us here in Liberia.

Let's first imagine two different communities. In the first community, there are no paved roads. Cars cannot pass in the rainy season. The closest hospital is several hours away. There is no electricity. There is no running water. People have to walk a long way to get water from the pump. There are no police or courts, which makes people feel insecure. Rogues run free. Rogues steal, hurt or even kill people.

Now imagine another community. In this second community, all the roads are paved. Cars can pass even in the rain. There is a hospital nearby. The hospital has the best doctors and the best equipment to treat malaria, Ebola and other diseases. There is electricity for everyone. There is running water, so people can get what they need to drink and cook without waiting in line at a pump. The police do good job, and the courts are quick to punish rogues. People feel secure.

I think we can all agree we would prefer to live in the second community, where there are lots of public services. People are healthier from the hospital. Transportation is cheaper and faster. It is safer. Probably there are even more jobs because public services make it easier for companies to operate. Life is better and easier for people in that community. We can all agree we like the imaginary community with all the public services. But how does a real community get to be like that?

It is not easy. In some places, citizens can provide some public services for themselves. Communities can organize to brush the roads, or to build clinics, or to maintain security. But in most places, it is too hard for citizens to provide all these public services on their own. For example, think about paving a road. First you have to shovel a lot of mud. Then you have to fill the road with gravel. And then you have to lay tarmac to pave the road. The process is expensive and slow. This is why we have foreign aid and investment. Providing public services is one important role for foreign donors and investors. It is maybe even the most important role.

One country that gives a lot of foreign aid and investment to Liberia is [China / America]. [China / America] gives many millions of dollars to help provide public services. [Chinese / American] companies and organizations also help build and maintain public services themselves. [China

/ America] has provided many public services to Liberians, including roads, bridges, schools, hospitals and clinics, especially during the Ebola epidemic.

[China / America] does not collect taxes from Liberians to do these things. [China / America] can provide public services even if we don't pay our taxes. [China / America] uses its own money to fund expensive public services that can be difficult for communities to provide for themselves, like new roads, new hospitals, and new schools. [China / America] makes a big contribution. That makes us all better off.

But [China / America] can also do some bad things. Sometimes [China / America] can spend money wastefully. For example it may pay companies that aren't very good at road building to build our roads. That's one reason our roads can get spoiled so quickly. Or [China / America] may hire companies that do not pay fair wages to Liberian workers. They may make them work long hours with little pay. And they may treat them badly or threaten them if they complain. Or [Chinese / American] officials or contractors may eat the money.

Overall, as a citizen it is valuable to think about the importance and challenges of building and maintaining public services. And it is valuable to think about what we can do to make sure public services are provided fairly, effectively and efficiently.

A.13 TAX COMPLIANCE GAME FOCUS GROUP QUESTIONS

I will ask a question to start the conversation. Then you should feel free to say exactly what's on your mind. **I want to hear from everybody in the room**. Don't be shy.

1. How did you decide how much of your income to report in each round of the activity?

2. At the beginning of the activity we talked about how public services like roads and schools and hospitals are provided in Liberia. What did you think about that lecture? Did the lecture affect the decisions you made in the activity? Did it make you want to report more of your income or less?

3. During the activity some of you picked a black bean. That means you were investigated. How did that make you feel? Did it make you want to report more of your income or less?

4. When you picked a black bean, that means you were investigated. So the government would find out how much you really earned. Did you feel the government could find out how much you really earned, even if you picked a white bean? Or did you feel your income was your secret, as long as you picked a white bean?

5. You know in Liberia we got lots of foreign donors and investors that provide public services for us. When you think about these various foreign donors and investors, like the Chinese or the Americans, how does that make you feel about your own Liberian government? Does it make you feel better or worse? Why?

6. Many Liberians are struggling and don't have much money to pay taxes. Some people think we should have to pay taxes anyway so the government won't need to take so much from foreign donors and investors. Other people think we should not have to pay taxes because the government already gets so much money from foreign). What do you think? When you think about all the foreign aid and investment we got in Liberia, does that make you feel we should pay more taxes or less taxes?

A.14 TAX COMPLIANCE GAME FOCUS GROUP EXCERPTS

MOTIVATIONS FOR TAX COMPLIANCE AND EVASION

Participants who claimed to have reported all of their income generally did so for one of three reasons. The most common was a desire to improve government service provision and contribute to economic development. The following excerpts are typical:

- "[Taxation] will help the government create the business-social network we are all yearning for. The roads, the linkages from rural areas to urban areas, and electricity. Education of

our youth. We the working should be able to pay income taxes so that we can pay our civil servants and the nation at large" (1.1.N.904).

- "It is important to pay tax as a citizen because it helps the government to construct buildings and help our country build roads from a rural area to an urban area. Especially when it comes to the educational system, we should pay tax" (1.2.N.910).

- "I reported all my money, because through my tax payment is what develops the country" (2.1.C.910).

Other participants expressed a more general desire to be "fair" to the government:

- "What I decide is that I put it all because it is good to be fair to your government. The country is for you, so you have to do your contribution towards your taxes" (1.1.N.904).

- "For me, I decided to put all my income, I guess to be fair to the government" (10.2.U.921).

- "For me, I decided to report all of my income because to cheat the government is not good. I am trying to tell the government that I'm not a cheater and it's not good to cheat" (10.2.U.921).

Only one participant cited fear of being audited as a motivation for tax compliance in the game (1.1.G.904).

Among those who admitted hiding some of their income, all cited necessity as their motivation. Some connected the game to private enterprise, and described tax evasion as necessary to ensure the survival of their business:

- "Maybe my business is you know, getting low. Then maybe if I report short money, it's just that I want to replace my business or I want to buy new things" (1.1.N.904).

- "My position was based on my hustle, on my responsibility for my business, what I do to make money. Based on that, I decided the minimum or maximum fee that I can give the government in taxes" (1.1.N.904).

Others viewed tax compliance as a burden on themselves and their families:

- "In some instances I decided to give all the income I received, but not in all instances. Because if the government always enforces tax on me, I will be left with nothing " (2.2.G.911).
- "If I report all, my family will not get anything" (1.1.U.919).
- "I will report income, [but] I will not give all. I will keep some for my family and myself, and I will give the other one to the government" (10.1.U.919).

Others (a minority) did not see any reason to pay their taxes at all. As one participant put it, "For me, paying tax is very difficult. Because the money I received in my envelop is small, and I think, what is the point if I give?"

REACTIONS TO VIGNETTES

Most participants answered the second focus group question (probing their reactions to the vignettes) by elaborating on their responses to the first, described above. Of those who reported that the vignettes motivated them to report more of their income, the majority cited their desire to improve government performance. The following excerpts illustrate:

- "According to what I heard from the reading, for the condition of the public services in the area, it really begged me to pay, to report my income. I know that if I pay the tax on time, the government will be able to buy the public services good" (10.1.U.919).
- "The lecture really encouraged me to pay the tax to the government because if [I] pay tax the government will build good road, good clinic, and good hospital" (10.1.U.919).
- "Based on the lecture, that encouraged me to report my income because I feel if I report more of my income, development will keep going on" (10.2.U.921).
- "From the lecture, it encouraged me to put more money in, because the more I pay my taxes at a good rate, I think any public facility will be more concrete and made more durable" (11.1.C.921).

- "The lecture made me want to report all of my income to enable the government to carry on funding for development" (2.2.G.910).

In two cases participants specifically mentioned a desire to reduce aid dependence in Liberia:

- "I have decided to report all my money to the government because the government always borrows outside our country" (1.1.N.904).

- "We only depend on foreign donors to do major activities for us. The government said they want you to report all of your [income], then tax will be deducted from there. The balance will be used for development within the country. So for this reason, I decided to report all my income for government tax to be deducted from" (1.11.U.921).

At least one participant noted that the taxes Liberians pay complement the taxes paid by foreign donors and investors:

- "Public services are provided by the government, but not only the government. The taxes you pay alongside the taxes the foreign donors pay to the government are then used to construct bridges, roads, hospitals, and those things help to develop a country" (1.2.N.910).

Another spoke approvingly of the role China plays in Liberia:

- "According to a certain portion, the Chinese treat the Liberian workers and give them more work" (2.1.N.910).

No participant reported that the vignette induced them to report *less* of their income.

PERCEPTIONS OF FOREIGN AID

Many participants expressed appreciation for the work that foreign donors do in Liberia (American, Chinese, and otherwise), many credited the government for attracting foreign assistance to the country, and many viewed the availability of foreign aid as motivation to pay more rather than fewer taxes. The following excerpts are representative:

- "More donors are coming in to develop or help with development. So, it encourages me to pay more taxes" (7.1.N.916).

- "I feel nice to see those people [foreign donors] coming in to help us or to come to our aid. So I feel nice to our government for bringing them in" (7.2.N.917).

- "I feel happy when the government comes in with those investors. At least she [the government] will feel she is doing the right thing for the citizens. The citizens too, based on those investors' performance in the country, they will feel their leaders are doing well. [The leaders] might go out and bring foreigners to empower and strengthen and tell them what to do or provide jobs. So I feel satisfied for that" (10.1.U.919).

- "I feel happy when foreigners are coming into our country. I feel good about my government. I feel good because it is good for foreigners to come to the country to help development" (2.2.G.911).

Some praised more specific strategies that the government has adopted to attract and regulate foreign assistance:

- "It makes me feel better because the government invited two foreign donors, so competition is going on between the two foreign donors" (1.1.N.904).

And others noted that foreign donors pay taxes as well, broadening the country's otherwise narrow tax base:

- "I feel good about our government because the foreigners that are coming here are paying tax to the government. [That] also helps the government to carry on more development" (2.2.G.911).

- "I feel proud and happy for the government. The foreign donors bring development and also pay taxes for the operations they do here. These taxes will be used by the government to bring in development, and those foreign donors will bring development as well. So I feel proud that there are foreign donors in the country" (1.2.N.910).

For many participants, however, the abundance of foreign donors in Liberia merely reveals the government's own limitations:

- "I don't really feel good if I see foreign donors coming to our country, and our government not doing anything. To see [Liberia] depend on the outside world to keep developing our own country. I feel bad about this when I see it going on" (1.11.U.921).

- "It makes me feel bad about my government, because it [development] is something the government needs to do for our own country people" (1.1.C.921).

- "It's like my government is not able to handle her own country" (1.1.N.904).

Some specifically criticized the terms of the agreements that the Liberian government has reached with foreign entities (1.1.N.904). Others denounced foreign donors for taking jobs and resources that might otherwise benefit Liberians:

- "I think they [foreign donors] are making no improvement because they take the resources and carry them away" (1.1.N.904).

- "It makes me feel bad because our resources are being taken out of the country" (2.1.G.910).

- "If the foreigners are coming in, the jobs that I should be doing, a foreigner will be doing. They carry my benefits, so I feel worse" (2.2.G.911).

- "I feel very frustrated with the way foreign investors come to this country to work. Because, we as Liberians, I strongly believe we have qualified people. The opportunity is there for young Liberians to develop the country, to acquire the same knowledge as the Chinese or Americans are getting. So if the opportunity is provided to go and learn and come back, I strongly believe that we can provide the same services here.... If we bring foreign people, they take money and aid and do not contribute to our development here. But if Liberians are well-educated and can do this, the money will contribute to the development of our country" (11.1.C.921).

- "If investors are coming to the country, they are bringing more workers along with them, and the Liberians have no opportunity for working. We should pay less tax, because we are not working" (2.1.U.910).

Finally, two participants specifically argued that foreign assistance ruptures the social contract between government and citizens, and the social fabric that unites Liberians more generally:

- "I feel worse because the government cater to the foreign donors more than the citizens" (1.1.N.921).

- "I feel bad because we Liberians we do not respect our own citizens; we honor the foreigners more than ourselves" (1.2.G.910).

B Cross-country analysis

B.1 Descriptive statistics

Table A.10 reports descriptive statistics for perceptions of government in the Afrobarometer survey. We construct an additive index of trust in government based on respondents' trust in the police, the military, the local council, the parliament, the president, and the courts. We code indicators for whether respondents trust each of these institutions a lot or somewhat, then add those indicators into an index scaled from 0 to 6. We also code an indicator for respondents' perceptions of democracy in their country, as well as three indicators for tax compliance and morale. These are identical to the indicators used in the observational component of our within-country analysis.

B.2 Coding rules

Our cross-country analysis relies on AidData to operationalize exposure to Chinese aid. Unfortunately, the AidData dataset is missing precise temporal or geographic information for many Chinese projects. Our goal in coping with missingness is to maximize statistical power while minimizing ambiguities that might affect our results. With that in mind, we first exclude projects for

which there is no precise geographic information within 25km of a known location (AidData precision code 1 or 2). Because we are interested in the effects of Chinese projects on citizens who live near them, we also exclude projects that provide only general administrative or budgetary support to the recipient government.

We then code whether each Afrobarometer respondent lives within 30km of a planned (future) or completed Chinese project. AidData includes a scheduled and actual start and end year for most projects, as well as the year that an agreement was signed for all projects. AidData also includes the status of each project: planned, active, or completed. The year the status refers to, though, is ambiguous. Consequently, we primarily rely on the agreement year and project start and end dates to determine status. For projects with both scheduled and actual start years, the actual start year occurs 0.76 years on average after the scheduled start year. For projects with both scheduled and actual end years, the actual end year occurs one year on average after the scheduled end year. We rely on actual start and end years whenever possible. When one or the other is unavailable, we rely on the scheduled start or end year instead, but add one year to reflect the fact that most projects both start and end roughly one year behind schedule.

We code respondents as living near a planned project if they were surveyed anytime before the agreement year of any project within a 30km radius. We code respondents as living near a completed project if they were surveyed anytime after or during the end year. Some projects are also missing an end year. In these cases we code respondents as living near a completed project if the status is completed and the survey was conducted in 2014 or after, the last year AidData is available. We also code respondents as living near a planned project if the status is planned, the agreement year is after 2010, and the survey was conducted in 2014 or after. (We assume that projects with an agreement year after 2010 were more likely to remain planned at the time the survey was conducted. We test the robustness of our results to alternate cutoff years in Section B.6 below.) In some cases we know that a respondent lives near a Chinese project, but we cannot infer its status at the time the survey was conducted. We exclude these respondents from our analysis.

To operationalize exposure to US aid, we use data from the Aid Information Management

Systems (AIMS) of the finance and planning ministries of the six African countries for which such data is available, and which were also surveyed by Afrobarometer: Burundi, Malawi, Nigeria, Senegal, Sierra Leone, and Uganda. As with our analysis of Chinese aid, we exclude projects that lack precise geographic information, as well as those that are classified as completed but that do not have corresponding start or end dates, following the same coding rules as above. We discuss the potential implications of these coding rules for our analysis in Appendix B.3 below.

B.3 Missing data

Our coding rules introduce additional missingness into the AidData and AIMS datasets. In Tables A.11 and A.12 we explore the potential consequences of that missingness by comparing the projects in our sample to those in the AidData and AIMS datasets by sector. If our coding rules cause us to systematically exclude projects in certain sectors—agriculture, communications, education, etc.—then we may over- or underestimate the impact of Chinese and/or US projects overall. For purposes of this comparison we focus on the six countries for which we have data on both US and Chinese projects.

From Table A.11, in general, the distribution of Chinese projects across sectors appears to be similar in our sample and in AidData. The most notable difference is in the communications sector, which comprises 21.5% of all projects in the AidData dataset for these six countries, but only 16.4% of all projects in our sample. It is not obvious how this particular difference would affect the conclusions we draw, however, and the differences across the remaining 15 sectors are minimal. From Table A.12, the distribution of US projects across sectors appears to be similar in our sample and the AIMS dataset as well. The health and agriculture sectors are somewhat over-represented in our sample, and the education sector is somewhat under-represented (though the latter sector accounts for just 3.2% of all projects in the AIMS dataset). Health sector projects constitute a plurality of all US-funded projects both in our sample and in the AIMS dataset, and in both cases the health sector accounts for almost twice as many projects as the next most common sector (agriculture). We see little reason to expect these discrepancies to affect our results in any

dramatic way.

B.4 PLANNED PROJECTS AS COUNTERFACTUALS FOR COMPLETED ONES

Our cross-country identification strategy involves comparing completed to planned Chinese and US projects. This identification strategy assumes that planned projects are valid counterfactuals for completed ones, and that citizens who live near planned projects are therefore valid counterfactuals for citizens who live near completed ones. This assumption may be violated if donors or recipient governments complete the highest priority projects first. To explore this possibility, in Tables A.13 and A.14 we compare the distribution of planned Chinese and US projects across sectors to the distribution of completed Chinese and US projects. If donors complete the highest priority projects first, then intuitively we should expect high priority sectors (transportation and communications infrastructure, for example) to constitute a larger proportion of completed projects than planned ones.

This does not appear to be the case. From Table A.13, while there are discrepancies in the distribution of sectors across planned and completed projects, these appear to be unsystematic, and are generally inconsistent with a sequencing of projects by priority. Among completed projects, the five most common sectors are health, education, agriculture, transportation, and government and civil society. Four of these five are the most common sectors among planned projects as well (though their rank order differs). The exceptions are agriculture and communications: the former constitutes a much larger proportion of completed projects than planned ones, while the latter constitutes a much larger proportion of planned projects than completed ones. But these are exceptions, and they are both high priority sectors for most developing countries. Similarly, among completed projects, the five least common sectors are other, trade and tourism, industry, food security, and emergency response. Four of these five are the least common sectors among planned projects as well. The exceptions are women in development and other: the former constitutes a larger proportion of completed projects than planned ones, while the latter constitutes a larger proportion of planned projects than completed ones.

From Table A.14, the distribution of sectors across completed and planned US projects appears to be similar as well. Among completed projects, the four most common sectors are health, government and civil society, reproductive health, and agriculture. These are the four most common sectors among planned projects as well. There are disproportionately more planned health sector projects than completed ones, but health sector projects are by far the most common in both cases. There are also disproportionately more planned agriculture projects than completed ones, and disproportionately more completed government and reproductive health projects than planned ones. But again, these discrepancies do not appear to be consistent with sequencing by priority. The remaining sectors together constitute a small fraction of US projects in the AIMS dataset, regardless of status.

B.5 Planned projects as selection effects

One complication for interpretation of our cross-national results is the possibility that planned projects affect citizens' attitudes before implementation begins. We minimize this risk by defining planned projects as those for which not even a formal agreement has yet been reached. As an additional robustness check, we use our survey data from Liberia to test whether respondents who live near planned Chinese projects in the AidData dataset are more likely to report having been exposed to those projects than respondents who live further away. If planned Chinese projects affect citizens' attitudes, then intuitively we should expect to observe a positive correlation between proximity to those projects as measured by AidData and self-reported exposure to them as measured in our survey.

But this does not appear to be the case. From Table A.7 above, while proximity to completed Chinese projects is highly positively correlated with survey-based measures of exposure to Chinese aid, proximity to planned projects is not. As discussed in Appendix A.5, the first of these two results suggests that our proxies are capturing exposure to Chinese projects in an empirically meaningful way. The second suggests that citizens in general do not seem to be exposed to Chinese projects before implementation begins, at least in Liberia. As a more stringent test, in Table A.8

we disaggregate exposure further to show that citizens who live near planned Chinese projects are no more or less likely to have even heard about these projects.

Second, we randomly sample 20 planned projects from the AidData dataset and perform an extensive search for additional information on how those projects might have been perceived locally, using the Stanford Africa news database and the websites and Facebook pages of newspapers included in the database. In general, Chinese projects do not appear to generate much news during the planning phase, and the locations of projects are only mentioned in a minority of cases (though this information may travel by word of mouth as well, via citizens or local politicians). In most cases, projects are announced in the context of signing ceremonies, press conferences, and press releases, with multiple projects announced at once, and with scant detail. Again, to minimize the possibility of anticipation effects from these events, we define planned projects as those for which not even a formal agreement has yet been reached. These projects are in such a nascent stage of development that anticipation effects are highly unlikely.

B.6 Results using alternate cutoffs for planned projects

In the paper we infer the status of Chinese projects that were still planned as of 2014, the year that AidData ends. In these cases, we code respondents as living near a planned project if the agreement year is after 2010, assuming that projects with earlier agreement years were more likely to be completed by the time the survey was conducted. In Tables A.15 and A.16 we instead code respondents as living near a planned project if the agreement year is after 2009 or 2008, respectively. Our results are substantively unchanged regardless. (Ideally we could also test the robustness of our results to later cutoff years. Unfortunately this leaves us with too few planned projects to estimate off of.)

B.7 Results using counts for planned and completed projects

In the paper we operationalize exposure to Chinese and US aid as a dummy for any Chinese or US projects within 30km of each Afrobarometer respondent. But some respondents live near more

than one planned or completed project. In the six countries for which we have data on both US and Chinese aid, 1.6% of respondents live near more than one completed Chinese project, 4.9% live near more than one planned Chinese project, 7.2% live near more than one completed US project, and 14% live near more than one planned US project. As a robustness check, in Table A.17 we rerun our analysis using the number of planned and completed Chinese and US funded projects as independent variables. Our results are substantively very similar to those in the paper. The only potentially noteworthy difference is that we no longer find a positive net effect of US aid on perceptions of the quality of democracy. But this does not alter our conclusions in any meaningful way.

B.8 Results dropping respondents who live near both planned and completed projects

In the paper we distinguish respondents who live near planned Chinese or US projects from those who live near completed Chinese or US projects. But some respondents live near both planned and completed projects. In the six countries for which we have data on both US and Chinese aid, just 1.7% of respondents live near at least one completed Chinese project and at least one planned Chinese project as well, and less than 1% (6 respondents out of 34,646) live near at least one completed US project and at least one planned US project as well. In the paper we code these respondents as living near both planned and completed projects. As a robustness check, in Table A.18 we drop these respondents. Our results are substantively very similar regardless. The only potentially noteworthy difference is that the positive net effect of Chinese aid on trust in government is no longer statistically significant at conventional levels (though it remains positive). But again, this does not alter our conclusions in any meaningful way.

B.9 Results using Chinese aid only

Our cross-country analysis in the paper focuses on the six countries for which we have AidData data on Chinese projects, AIMS data on US projects, and Afrobarometer data on citizens' perceptions of government. To explore whether our results are specific to these six countries, in Table A.19 we expand our sample to cover the 38 countries for which we have both AidData and Afrobarometer data, but not AIMS data. These analyses by necessity exclude US projects. Unsurprisingly, our results vary when we expand from six to 38 countries. But our conclusions remain unchanged. In the paper we find that Chinese aid increases trust in government but has no effect on perceptions of democracy or tax compliance or morale; in Table A.19 we find that Chinese aid improves perceptions of democracy but has no effect on trust in government or tax compliance or morale. Regardless of the sample, our results suggest that Chinese does not diminish state legitimacy and may in fact enhance it.

B.10 Results using Chinese aid only and disaggregating by sector

Recipient governments may not be able to claim credit for the highly visible, large-scale infrastructure projects that China often finances in Africa. Infrastructure is also typically funded with tax revenues, and citizens who observe foreign donors building infrastructure may conclude that their government is too weak or corrupt to do so on its own. To explore whether Chinese infrastructure projects erode state legitimacy in ways that other projects do not, in Table A.20 we distinguish infrastructure projects[90] from projects focused on other sectors.[91] These two categories may not be mutually exclusive: it is possible, for example, that some projects classified as targeting the "health" sector involved building new infrastructure, while some projects classified as

[90] These include projects classified as belonging to any one of the following sectors: communications; energy generation and supply; industry, mining, and construction; transport and storage; or water supply and sanitation.

[91] These include projects classified as health; population policies/programmes and reproductive health; education; agriculture, forestry, and fishing; emergency response; government and civil society; other multisector; and other social infrastructure and services.

"water supply and sanitation" did not. Without more detail on the nature of each project, we are limited to these rather coarse categorizations. We also do not have enough data on US projects to disaggregate in this way, and so omit them from our analysis here. With these caveats in mind, we find that Chinese infrastructure projects do appear to diminish tax morale, though the difference between coefficients is only weakly statistically significant. In contrast, projects in other sectors appear to (weakly) increase trust in government and improve perceptions of democracy. Together these results suggest infrastructure projects may be more likely to have de-legitimizing effects than projects in other sectors, but that in either case the risk of de-legitimizing effects is low.

Table A.1: Descriptive statistics for within-country analysis

	Rural respondents			Urban respondents		
	Mean	S.D.	N	Mean	S.D.	N
Exposure to foreign aid						
Knows Chinese projects	0.38	0.49	685	0.74	0.44	196
Knows US projects	0.36	0.48	685	0.49	0.50	196
Used Chinese projects	0.34	0.47	685	0.83	0.38	196
Used US projects	0.33	0.47	685	0.50	0.50	196
Worked for Chinese company	0.02	0.15	685	0.06	0.24	196
Worked for US company	0.05	0.22	685	0.13	0.34	196
Friends or family worked for Chinese company	0.15	0.36	685	0.32	0.47	196
Friends or family worked for US company	0.13	0.34	685	0.27	0.44	196
Perceptions of government						
Perceptions of government (index)	1.68	0.90	685	1.34	0.89	196
Believes democracy is high quality	0.62	0.49	652	0.52	0.50	196
Tax compliance and morale						
Has ever refused to pay taxes	0.08	0.28	652	0.15	0.36	186
Believes government has right to tax	0.79	0.40	671	0.89	0.31	186
Believes it is easy to avoid paying taxes	0.33	0.47	652	0.30	0.46	186
Perceived obligation to pay taxes (for survey experiment)						
Feels obligated even if government makes bad policies	0.48	0.50	685	0.67	0.47	196
Feels obligated even if taxpayers are poor	0.51	0.50	685	0.73	0.45	196
Feels obligated even if government is corrupt	0.60	0.49	685	0.82	0.38	196
Feels obligated even if donors provide most services	0.71	0.45	685	0.82	0.38	196

Table A.2: Comparison of urban survey sample to Blair et al. sample

	Urban survey sample	Blair et al. sample
Age	39	37
% female	0.63	0.57
% Christian	0.85	0.90
% with primary education	0.10	0.09
% with secondary education	0.38	0.42
% farmer	0.15	0.01

Notes: Comparison of characteristics of respondents in our urban survey sample from 2015 to respondents in Blair et al.'s sample of Monrovia residents from 2015.

Table A.3: Comparison of rural survey sample to Vinck et al. sample

	Rural survey sample				Vinck et al. sample			
	All	Bong	Lofa	Nimba	All	Bong	Lofa	Nimba
Age	40	41	36	42	37	38	39	38
% Christian	0.86	0.90	0.89	0.79	0.86	0.75	0.87	0.90
% with no education	0.30	0.34	0.32	0.24	0.35	0.52	0.49	0.37
% with primary education	0.21	0.22	0.18	0.21	0.16	0.20	0.12	0.15
% with secondary education	0.25	0.21	0.21	0.35	0.48	0.28	0.39	0.48
% literate	0.40	0.38	0.37	0.46	0.59	0.42	0.48	0.60
% farmer	0.61	0.58	0.71	0.56	0.43	0.72	0.73	0.60

Notes: Comparison of characteristics of respondents in our rural survey sample from 2015 to respondents in Vinck et al.'s nationally representative sample from 2011.

Table A.4: Balance test for rural survey experiment

	Control	Government	China	US
Female	0.05	0.01	-0.06	-0.00
	(0.04)	(0.05)	(0.04)	(0.04)
Age	0.00	-0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Finished primary school	-0.04	0.08	0.02	-0.06
	(0.05)	(0.05)	(0.04)	(0.05)
Finished junior high school	0.06	0.05	-0.07	-0.04
	(0.05)	(0.06)	(0.04)	(0.05)
Finished high school	0.07	0.07	-0.05	-0.09
	(0.06)	(0.05)	(0.05)	(0.05)*
Employed	0.09	-0.10	-0.05	0.05
	(0.10)	(0.08)	(0.08)	(0.09)
Muslim	0.03	0.11	-0.21	0.07
	(0.13)	(0.16)	(0.15)	(0.15)
Household quality index	0.02	0.01	-0.03	0.00
	(0.03)	(0.03)	(0.03)	(0.03)
Observations	638	638	638	638

Notes: Marginal effects from multinomial logit regressions of treatment assignment in the survey experiment on individual-level controls in the rural sample. Standard errors, clustered by community, in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.5: Balance test for urban survey experiment

	Control	Government	China	US
Female	-0.01	0.14	-0.10	-0.03
	(0.08)	(0.05)***	(0.05)**	(0.08)
Age	-0.00	0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Finished primary school	0.03	0.07	-0.11	0.01
	(0.14)	(0.15)	(0.12)	(0.09)
Finished junior high school	0.08	0.10	-0.01	-0.17
	(0.09)	(0.10)	(0.11)	(0.09)*
Finished high school	0.03	0.12	-0.12	-0.03
	(0.08)	(0.10)	(0.05)**	(0.05)
Employed	0.01	0.03	-0.06	0.02
	(0.07)	(0.06)	(0.06)	(0.08)
Muslim	-0.04	-0.02	0.08	-0.02
	(0.12)	(0.06)	(0.10)	(0.19)
Household quality index	-0.08	0.15	0.03	-0.11
	(0.06)	(0.06)**	(0.06)	(0.06)*
Observations	189	189	189	189

Notes: Marginal effects from multinomial logit regressions of treatment assignment in the survey experiment on individual-level controls in the urban sample. Standard errors, clustered by community, in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.6: Balance test for tax compliance game

	Control	Government	China	US
Female	0.05	0.00	-0.03	-0.02
	(0.03)	(0.03)	(0.03)	(0.03)
Age	0.01	0.00	-0.00	-0.00
	(0.00)***	(0.00)	(0.00)	(0.00)
Finished primary school	-0.04	-0.05	0.06	0.03
	(0.10)	(0.11)	(0.13)	(0.13)
Finished junior high school	-0.14	0.00	0.09	0.06
	(0.10)	(0.11)	(0.12)	(0.12)
Finished high school	-0.07	-0.04	0.04	0.08
	(0.09)	(0.10)	(0.12)	(0.12)
Employed	-0.03	0.00	-0.03	0.05
	(0.03)	(0.03)	(0.03)	(0.03)
Muslim	0.11	0.13	-0.12	-0.12
	(0.08)	(0.08)	(0.10)	(0.10)
Observations	722	722	722	722

Notes: Marginal effects from multinomial logit regressions of treatment assignment in the tax compliance game on individual-level controls. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.7: Correlation between survey- and AidData-based proxies for Chinese aid in rural Liberia

	Index of exposure to Chinese projects	User of Chinese projects	Worker for Chinese contractors
Proximity to completed Chinese projects	0.08	0.03	0.02
	(0.03)***	(0.01)**	(0.01)**
Proximity to planned Chinese projects	-0.02	-0.01	-0.01
	(0.02)	(0.01)	(0.01)
Completed vs. planned p-value	0.038	0.093	0.093
Observations	685	685	685
Individual-level controls	Y	Y	Y
Community-level controls	Y	Y	Y

Notes: Correlation between self-reported exposure to Chinese aid in rural Liberia and proximity to the nearest Chinese project recorded by AidData, measured in units of 10km. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.8: Correlation between survey- and AidData-based proxies for Chinese aid in rural Liberia, disaggregated

	Knows Chinese projects	Used Chinese projects	Worked for Chinese company	Friends or family worked for Chinese company
Proximity to completed Chinese projects	0.03	0.02	0.00	0.03
	(0.01)***	(0.01)**	(0.00)	(0.01)**
Proximity to planned Chinese projects	-0.01	-0.00	0.00	-0.01
	(0.01)	(0.01)	(0.00)	(0.01)*
Completed vs. planned p-value	0.014	0.208	0.884	0.050
Observations	685	685	685	685
Individual-level controls	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y

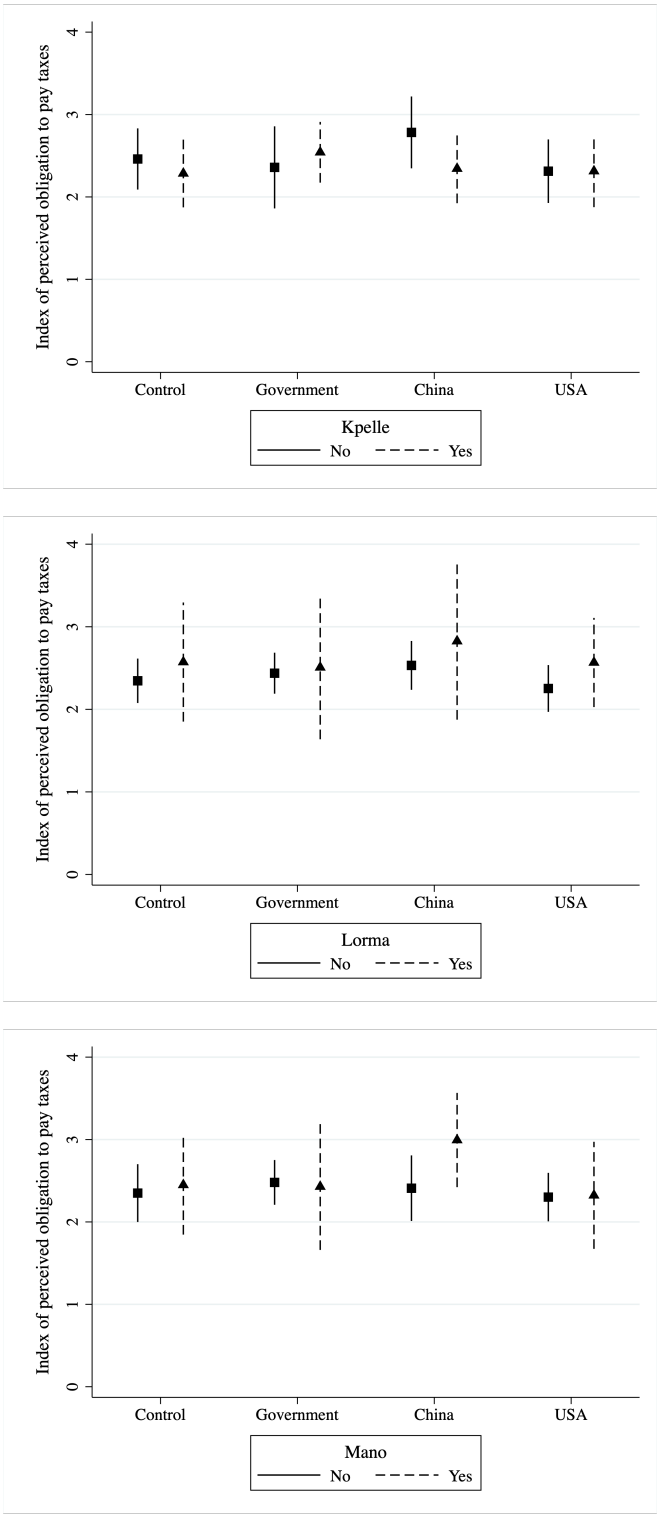
Notes: Correlation between self-reported exposure to Chinese aid in rural Liberia and proximity to the nearest Chinese project recorded by AidData, measured in units of 10km. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.9: Foreign aid and state legitimacy in Liberia using survey data and AidData

	Perceptions of government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
Proximity to completed Chinese projects	0.03	0.02	-0.00	0.00	-0.01
	(0.02)*	(0.01)	(0.01)	(0.01)	(0.01)
Proximity to planned Chinese projects	-0.04	-0.04	0.00	-0.01	0.01
	(0.01)***	(0.01)***	(0.01)	(0.01)	(0.01)
Completed vs. planned p-value	0.016	0.009	0.706	0.451	0.096
Observations	685	652	652	671	652
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y

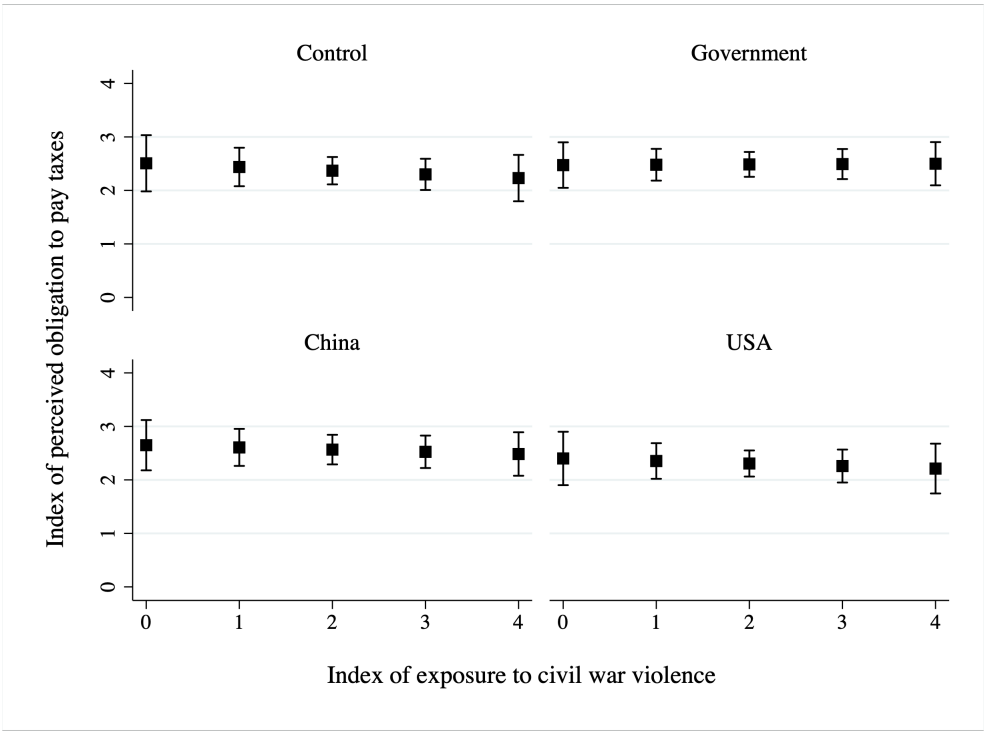
Notes: Correlation between exposure to Chinese aid and perceptions of government in rural Liberia using AidData. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A.1: Heterogeneous treatment effects by tribe in rural survey experiment in Liberia



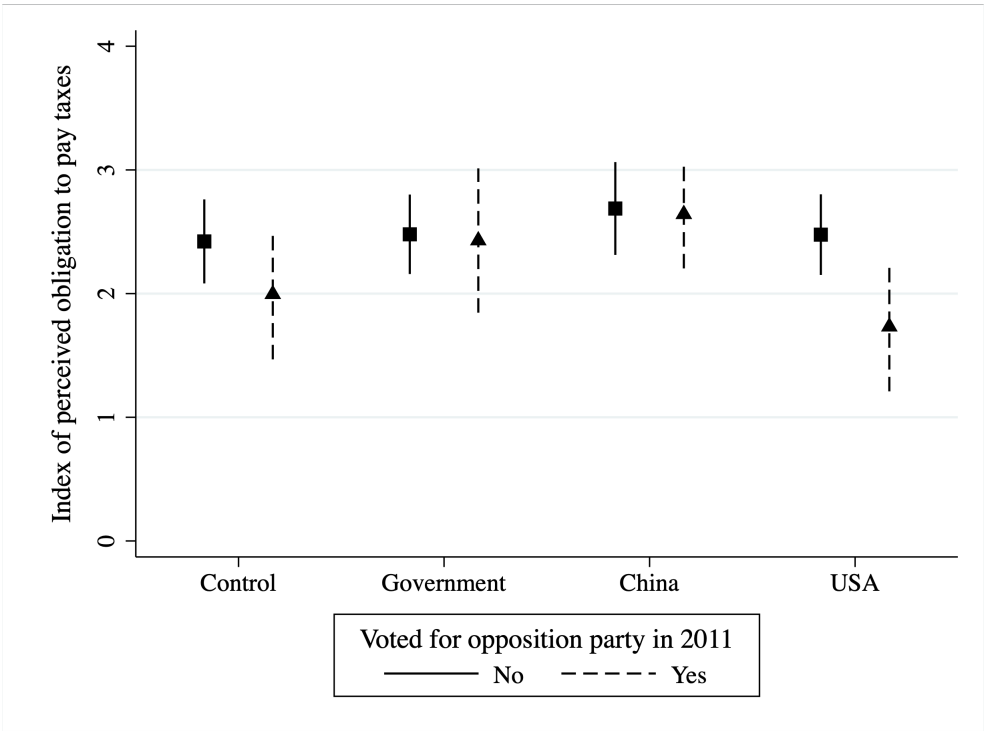
Notes: Heterogeneous treatment effects on perceived obligation to pay taxes (indexed from 0 to 4) in survey experiment in rural Liberia. Squares denote fitted values; lines denote 95% confidence intervals. Standard errors are clustered by community.

Figure A.2: Heterogeneous treatment effects by exposure to wartime violence in rural survey experiment in Liberia



Notes: Heterogeneous treatment effects on perceived obligation to pay taxes (indexed from 0 to 4) in survey experiment in rural Liberia. Squares denote fitted values; lines denote 95% confidence intervals. Standard errors are clustered by community.

Figure A.3: Heterogeneous treatment effects by vote choice in rural survey experiment in Liberia



Notes: Heterogeneous treatment effects on perceived obligation to pay taxes (indexed from 0 to 4) in survey experiment in rural Liberia. Squares denote fitted values; lines denote 95% confidence intervals. Standard errors are clustered by community.

Figure A.4: Tax compliance game schematic

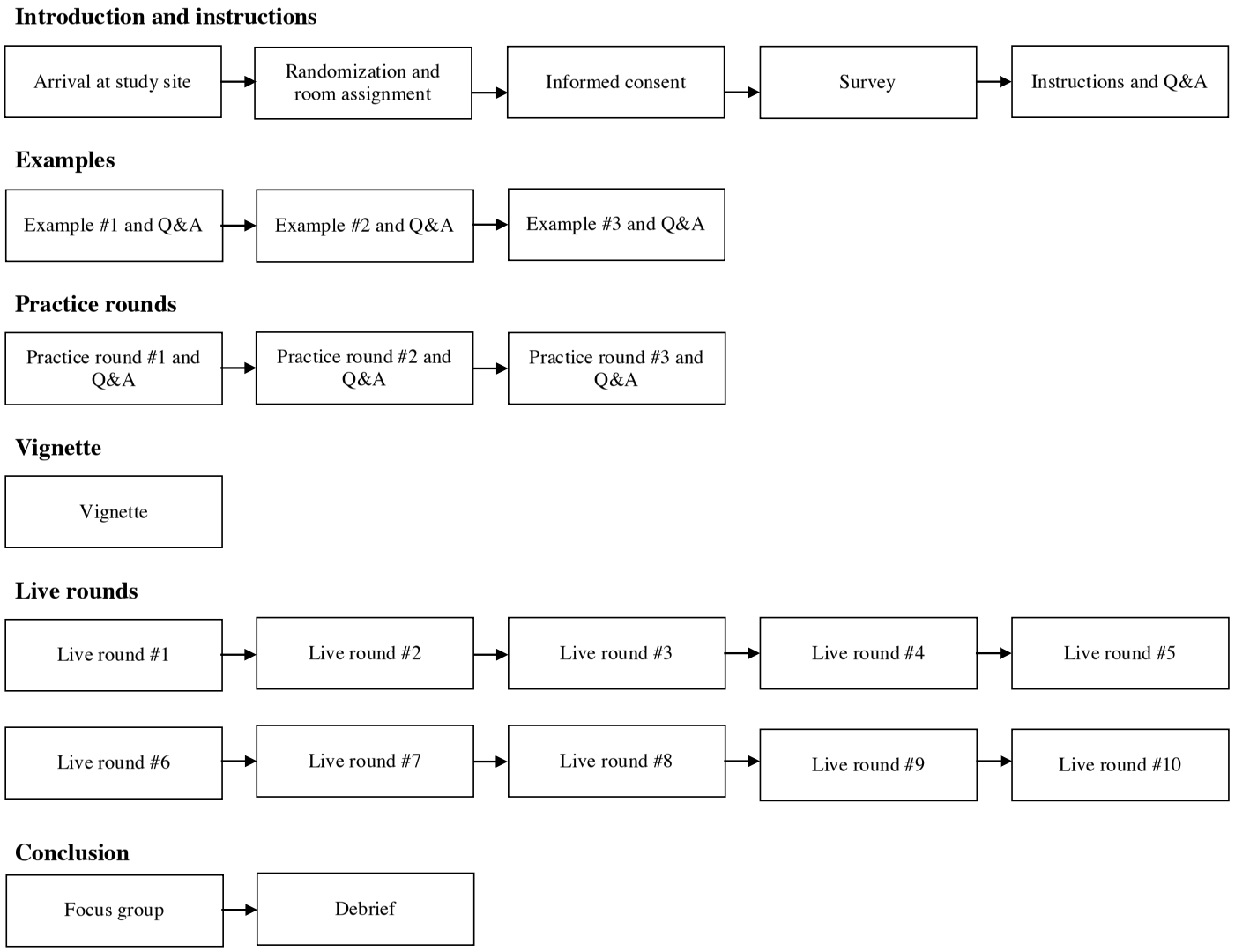


Table A.10: Descriptive statistics for cross-country analysis

	Mean	S.D.	Min	Max	First round available	Last round available
Trust in government (index)	2.44	1.84	0	5	2	6
Believes democracy is high quality	0.48	0.5	0	1	2	6
Has ever refused to pay taxes	0.08	0.28	0	1	5	6
Believes government has right to tax	0.71	0.45	0	1	2	6
Believes it is easy to avoid paying taxes	0.19	0.39	0	1	5	6

Table A.11: Comparison of Chinese projects in full sample to Chinese projects in our sample by sector

	N		Proportion	
	All	Sample	All	Sample
Agriculture, Forestry and Fishing	33	22	0.107	0.100
Communications	66	36	0.215	0.164
Education	31	22	0.101	0.100
Emergency Response	2	2	0.007	0.009
Energy Generation and Supply	19	14	0.062	0.064
Food Security Assistance	1	1	0.003	0.005
Government and Civil Society	17	15	0.055	0.068
Health	27	25	0.088	0.114
Industry, Mining, Construction	4	2	0.013	0.009
Other	13	9	0.042	0.041
Reproductive Health	5	5	0.016	0.023
Social Services	11	10	0.036	0.046
Trade and Tourism	3	3	0.010	0.014
Transport and Storage	61	41	0.199	0.187
Water Supply and Sanitation	10	9	0.033	0.041
Women in Development	4	3	0.013	0.014
Total	307	219	1	1

Notes: Distribution of sectors for Chinese projects in AidData and in our sample after dropping projects for which we lack temporal or geographic information. These figures refer to the six countries for which we have data on both US and Chinese projects.

Table A.12: Comparison of US projects in full sample to US projects in our sample by sector

	N		Proportion	
	All	Sample	All	Sample
Agriculture, Forestry and Fishing	218	109	0.209	0.252
Banking/Financial Services	14	0	0.013	0.000
Bio-Diversity	11	2	0.011	0.005
Education	33	4	0.032	0.009
Emergency Response	2	1	0.002	0.002
Environmental Policy	15	0	0.014	0.000
Food Aid	14	0	0.013	0.000
Government and Civil Society	150	76	0.144	0.176
Health	481	205	0.460	0.475
Industrial Development	1	0	0.001	0.000
Multisector Aid	12	0	0.011	0.000
Other	24	0	0.023	0.000
Reproductive Health	57	31	0.055	0.072
Social Services	10	3	0.010	0.007
Women in Development	3	1	0.003	0.002
Total	1,045	432	1	1

Notes: Distribution of sectors for US projects in AMP and in our sample after dropping projects for which we lack temporal or geographic information. These figures refer to the six countries for which we have data on both US and Chinese projects.

Table A.13: Comparison of completed and planned Chinese projects by sector

	N		Proportion	
	Completed	Planned	Completed	Planned
Agriculture, Forestry and Fishing	17	8	0.138	0.050
Communications	3	35	0.024	0.219
Education	19	14	0.154	0.088
Emergency Response	0	2	0.000	0.012
Energy Generation and Supply	10	5	0.081	0.031
Food Security Assistance	1	0	0.008	0.000
Government and Civil Society	14	9	0.114	0.056
Health	23	16	0.187	0.100
Industry, Mining, Construction	1	2	0.008	0.012
Other	1	8	0.008	0.050
Reproductive Health	3	5	0.024	0.031
Social Services	7	6	0.057	0.038
Trade and Tourism	1	3	0.008	0.019
Transport and Storage	14	37	0.114	0.231
Water Supply and Sanitation	6	9	0.049	0.056
Women in Development	3	1	0.024	0.006
Total	123	160	1	1

Notes: Distribution of sectors for completed and planned Chinese projects. These figures refer to the six countries for which we have data on both US and Chinese projects.

Table A.14: Comparison of completed and planned US projects by sector

	N		Proportion	
	Completed	Planned	Completed	Planned
Agriculture, Forestry and Fishing	28	81	0.102	0.224
Bio-Diversity	2	2	0.007	0.006
Education	4	2	0.015	0.006
Emergency Response	1	0	0.004	0.000
Government and Civil Society	73	69	0.265	0.191
Health	133	200	0.484	0.552
Reproductive Health	31	5	0.113	0.014
Social Services	2	3	0.007	0.008
Women in Development	1	0	0.004	0.000
Total	275	362	1	1

Notes: Distribution of sectors for completed and planned US projects. These figures refer to the six countries for which we have data on both US and Chinese projects.

Table A.15: Foreign aid and state legitimacy across 6 African countries using 2009 cutoff for planned projects

	Trust in government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
Near completed Chinese project	0.23	0.01	-0.01	-0.02	0.03
	(0.06)***	(0.02)	(0.01)	(0.03)	(0.02)
Near planned Chinese project	0.05	0.01	0.04	0.04	-0.001
	(0.06)	(0.02)	(0.04)	(0.01)***	(0.05)
Near completed US project	0.01	0.01	-0.02	0.04	-0.03
	(0.07)	(0.01)	(0.01)	(0.01)***	(0.01)**
Near planned US project	-0.10	-0.05	0.07	0.06	0.25
	(0.06)*	(0.02)***	(0.09)	(0.02)***	(0.19)
Completed vs. planned Chinese project p-value	0.043	0.922	0.337	0.137	0.570
Completed vs. planned US project p-value	0.180	0.003	0.333	0.427	0.147
Observations	21,857	23,759	11,426	24,910	9,914
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Afrobarometer round FE	Y	Y	Y	Y	Y
Cutoff for planned projects	2009	2009	2009	2009	2009
Buffer	30km	30km	30km	30km	30km

Notes: Correlation between exposure to foreign aid and perceptions of government across 6 African countries. Exposure is operationalized as a dummy for any completed or planned Chinese or US projects within a 30km radius. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.16: Foreign aid and state legitimacy across 6 African countries using 2008 cutoff for planned projects

	Trust in government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
Near completed Chinese project	0.23	0.01	-0.01	-0.02	0.03
	(0.06)***	(0.02)	(0.01)	(0.03)	(0.02)
Near planned Chinese project	0.05	0.01	0.04	0.04	-0.001
	(0.06)	(0.02)	(0.04)	(0.01)***	(0.05)
Near completed US project	0.01	0.01	-0.02	0.04	-0.03
	(0.07)	(0.01)	(0.01)	(0.01)***	(0.01)**
Near planned US project	-0.10	-0.05	0.07	0.06	0.25
	(0.06)*	(0.02)***	(0.09)	(0.02)***	(0.19)
Completed vs. planned Chinese project p-value	0.043	0.922	0.337	0.137	0.570
Completed vs. planned US project p-value	0.180	0.003	0.333	0.427	0.147
Observations	21,857	23,759	11,426	24,910	9,914
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Afrobarometer round FE	Y	Y	Y	Y	Y
Cutoff for planned projects	2008	2008	2008	2008	2008
Buffer	30km	30km	30km	30km	30km

Notes: Correlation between exposure to foreign aid and perceptions of government across 6 African countries. Exposure is operationalized as a dummy for any completed or planned Chinese or US projects within a 30km radius. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.17: Foreign aid and state legitimacy across 6 African countries using number of projects

	Trust in government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
# of nearby completed Chinese projects	0.13	-0.005	-0.01	-0.03	0.02
	(0.04)***	(0.01)	(0.01)	(0.01)**	(0.01)*
# of nearby planned Chinese projects	0.03	-0.01	0.04	-0.02	-0.004
	(0.02)	(0.01)	(0.05)	(0.01)	(0.05)
# of nearby completed US projects	0.01	-0.002	-0.004	0.01	-0.003
	(0.02)	(0.005)	(0.003)	(0.005)	(0.004)
# of nearby planned US projects	0.03	0.004	0.03	0.01	0.11
	(0.01)***	(0.002)*	(0.05)	(0.002)***	(0.11)
Completed vs. planned Chinese project p-value	0.016	0.764	0.325	0.470	0.707
Completed vs. planned US project p-value	0.336	0.225	0.515	0.627	0.300
Observations	21,857	23,759	11,426	24,910	9,914
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Afrobarometer round FE	Y	Y	Y	Y	Y
Cutoff for planned projects	2010	2010	2010	2010	2010
Buffer	30km	30km	30km	30km	30km

Notes: Correlation between exposure to foreign aid and perceptions of government across 6 African countries. Exposure is operationalized as the number of completed or planned Chinese or US projects within a 30km radius. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.18: Foreign aid and state legitimacy across 6 African countries dropping respondents near both planned and completed projects

	Trust in government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
Near completed Chinese project	0.11	-0.01	-0.003	-0.003	0.04
	(0.07)	(0.02)	(0.01)	(0.04)	(0.02)*
Near planned Chinese project	0.02	0.004	0.10	0.05	0.07
	(0.06)	(0.02)	(0.09)	(0.02)***	(0.08)
Near completed US project	0.01	0.02	-0.02	0.04	-0.03
	(0.07)	(0.01)	(0.01)	(0.01)***	(0.01)**
Near planned US project	-0.11	-0.05	0.07	0.06	0.25
	(0.06)*	(0.02)***	(0.09)	(0.02)***	(0.19)
Completed vs. planned Chinese project p-value	0.291	0.582	0.252	0.196	0.643
Completed vs. planned US project p-value	0.147	0.002	0.335	0.371	0.147
Observations	21,457	23,420	11,289	24,482	9,807
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Afrobarometer round FE	Y	Y	Y	Y	Y
Cutoff for planned projects	2010	2010	2010	2010	2010
Buffer	30km	30km	30km	30km	30km

Notes: Correlation between exposure to foreign aid and perceptions of government across 6 African countries. Exposure is operationalized as a dummy for any completed or planned Chinese or US projects within a 30km radius. We drop respondents who live near both completed and planned projects. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.19: Chinese aid and state legitimacy across 38 African countries

	Trust in government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
Near completed Chinese project	0.02	0.02	0.01	-0.02	0.001
	(0.03)	(0.01)**	(0.01)*	(0.01)**	(0.01)
Near planned Chinese project	-0.03	-0.01	0.01	0.002	0.03
	(0.03)	(0.01)**	(0.01)	(0.01)	(0.02)**
Completed vs. planned Chinese project p-value	0.198	0.002	0.849	0.13	0.047
Observations	116,176	125,624	72,909	130,715	57,553
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Afrobarometer round FE	Y	Y	Y	Y	Y
Cutoff for planned projects	2010	2010	2010	2010	2010
Buffer	30km	30km	30km	30km	30km

Notes: Correlation between exposure to foreign aid and perceptions of government across 6 African countries. Exposure is operationalized as a dummy for any completed or planned Chinese or US projects within a 30km radius. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.20: Chinese aid and state legitimacy across 38 African countries, disaggregated by type

	Trust in government (index)	Believes democracy is high quality	Has ever refused to pay taxes	Believes government has right to tax	Believes it is easy to avoid paying taxes
Infrastructure projects					
Near completed Chinese project	0.05	-0.01	0.01	-0.02	0.001
	(0.04)	(0.01)	(0.01)	(0.01)**	(0.01)
Near planned Chinese project	0.01	-0.01	0.01	0.01	0.05
	(0.03)	(0.01)*	(0.01)	(0.01)	(0.02)***
Other projects					
Near completed Chinese project	0.03	0.04	0.002	-0.02	-0.003
	(0.04)	(0.01)***	(0.01)	(0.02)	(0.01)
Near planned Chinese project	-0.09	-0.01	0.01	-0.01	-0.01
	(0.04)**	(0.01)	(0.02)	(0.01)	(0.03)
Infrastructure projects					
Completed vs. planned Chinese project p-value	0.458	0.681	0.997	0.059	0.010
Other projects					
Completed vs. planned Chinese project p-value	0.054	0.002	0.63	0.856	0.750
Observations	116,176	125,624	72,909	130,715	57,553
Individual-level controls	Y	Y	Y	Y	Y
Community-level controls	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y
Cutoff for planned projects	2010	2010	2010	2010	2010
Buffer	30km	30km	30km	30km	30km

Notes: Correlation between exposure to foreign aid and perceptions of government across 38 African countries, disaggregating between infrastructure and other projects. Exposure is operationalized as a dummy for any Chinese projects within a 30km radius. Standard errors, clustered by community, are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.