

On-Line Appendices to “Who is Targeted in Corruption?”

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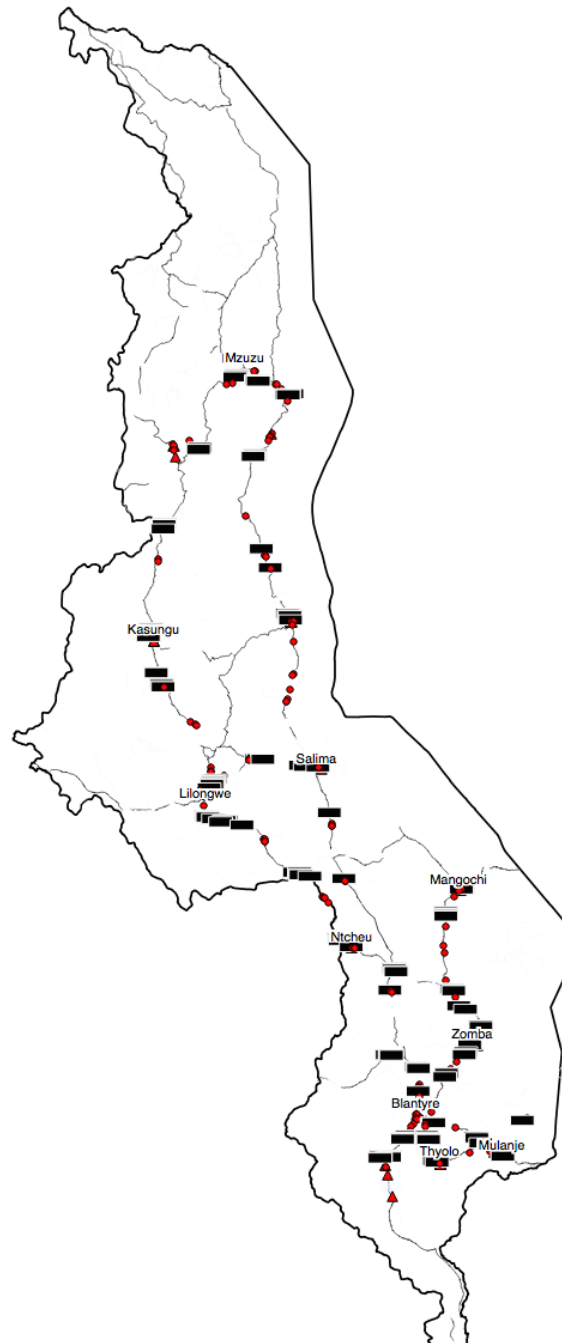
Appendix A Research Design

A.1 Routes and Locations

Table A.1: Driving Routes

| Route | | Distance (kms) | Time (hours) | Road Blocks | ESCOM Offices |
|-------|-------------------------------|-------------------|-----------------|----------------|------------------|
| A | Lilongwe-Kasungu-Mzuzu | 358 | 5 | 6 | 4 |
| B | Mzuzu-Salima-Lilongwe | 431 | 6 | 7 | 3 |
| C | Lilongwe-Ntcheu-Blantyre | 406 | 6 | 6 | 4 |
| D | Blantyre-Thyolo/Mulanje-Zomba | 324 | 6 | 4 | 3 |
| E | Zomba-Mangochi-Lilongwe | 396 | 4.5 | 5 | 4 |

Figure A.1: Location of Traffic Police Roadblock Observations



Note: Permanent roadblocks are shown as black bars and temporary roadblocks are shown as red dots.

A.2 Insurance Discs

Figure A.2: Photo Showing an Insurance Sticker on a Malawian Vehicle



A.3 Plausibility of Treatments

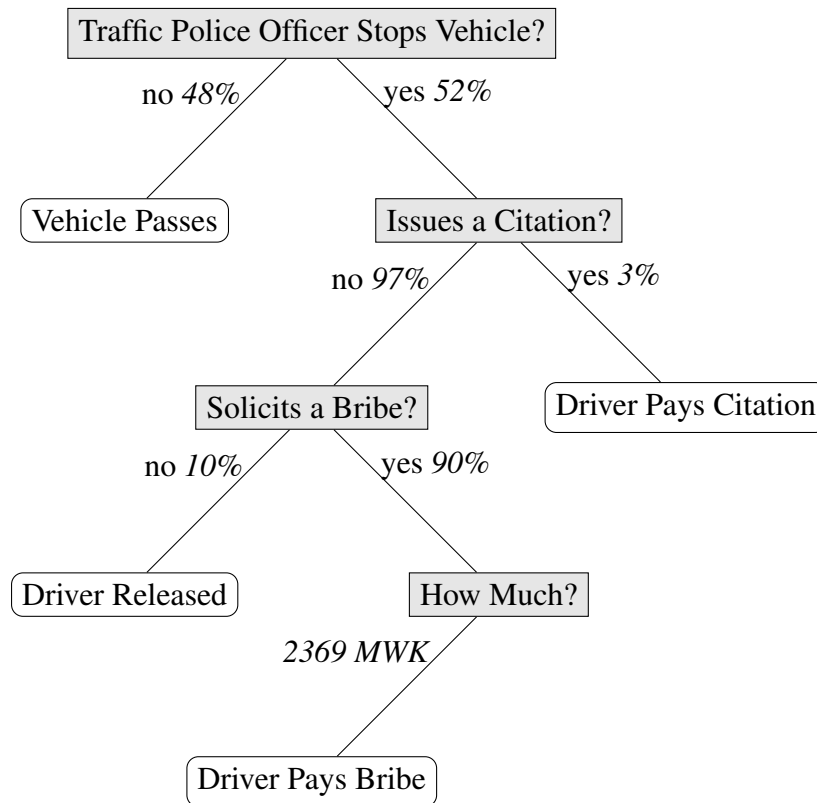
Individuals who are rich and connected (e.g., government officials, business executives, and attorneys) are plausible, as are those who are poor and not connected (e.g., farmers, teachers, and laborers). While considerably less common, individuals who are poor and connected are also plausible, since politically powerful individuals are often able to channel opportunities to poorer relatives through low-level positions, and poor individuals may leverage connections to powerful relations when interacting with government officials. Individuals who are rich and not politically connected are least common, but do exist. Some health workers, nonprofit managers, and business managers obtain their positions through education and experience while remaining outside the political arena. This is particularly possible for Malawians who complete degrees or obtain work experience in other countries. However, while politically connected poor confederates are made plausible by a strong signal of political connections, rich confederates’ lack of political connections could only be conveyed through an *absence* of such signals; because the assumption is that rich people are well connected, confederates assigned to be rich and non-politically connected may nevertheless be perceived as rich and politically connected.

As part of the data collection after each interaction, confederates recorded the degree to which they felt that the official with whom they interacted believed the treatments conveyed. Fewer than 20% of officials in each component were judged to be “a bit suspicious” and this distribution was uniform across treatment assignments. Therefore, we believe that all of these assigned roles are plausible in Malawi and that our confederates generally portrayed them in a believable way, aided to a great extent by the Anti-Corruption Bureau officer that conducted an extensive two-day role playing training for the study’s confederates.

Appendix B Summary Statistics

B.1 Descriptive Statistics

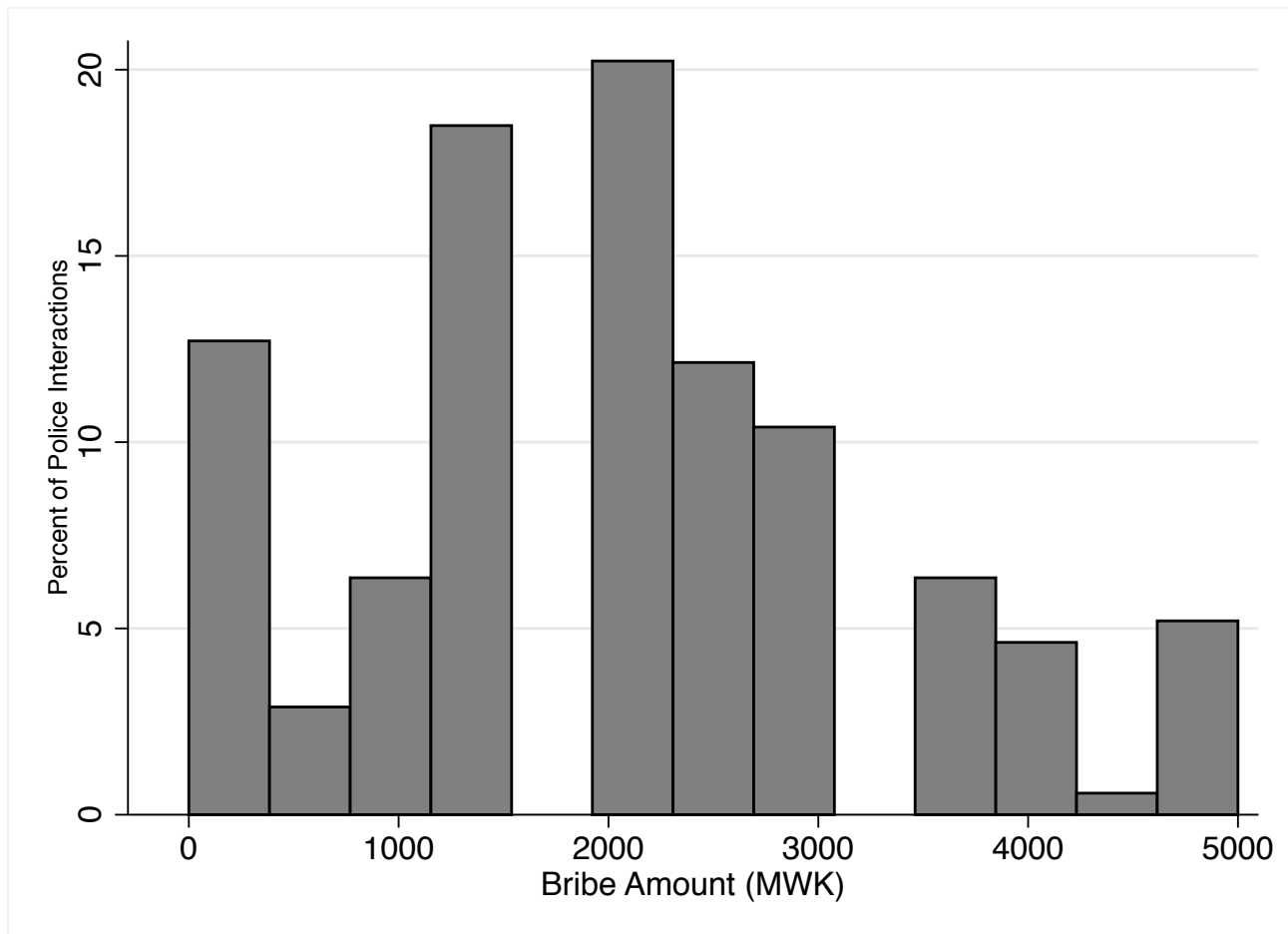
Figure B.1: The sequence of decision making for traffic police officers with descriptive information about study outcomes.



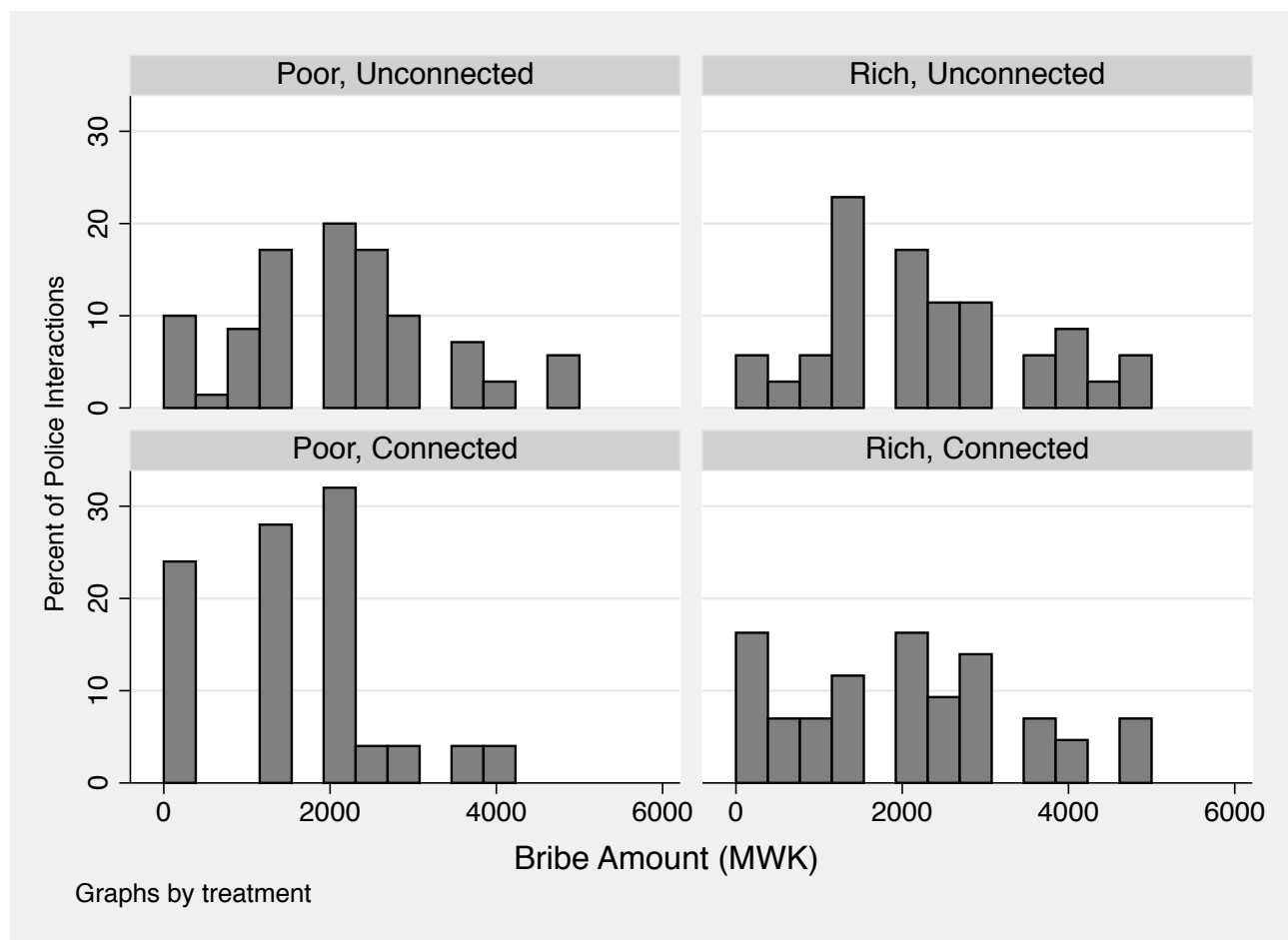
Source: Data based on 333 distinct roadblock observations.

Table B.1: Summary Statistics for Traffic Police Observations

| | Mean | SD | Min | Max | N |
|--------------------------------|-------------|-----------|------------|------------|----------|
| <i>Treatments</i> | | | | | |
| High SES | 0.50 | 0.50 | 0.00 | 1.00 | 333 |
| Political Connections | 0.42 | 0.49 | 0.00 | 1.00 | 333 |
| Coethnicity | 0.29 | 0.46 | 0.00 | 1.00 | 173 |
| <i>Outcomes</i> | | | | | |
| Stopped | 0.52 | 0.50 | 0.00 | 1.00 | 333 |
| Paid Bribe | 0.87 | 0.33 | 0.00 | 1.00 | 173 |
| Bribe Amount (MWK) | 2067.63 | 1287.46 | 0.00 | 5000.00 | 173 |
| Paid Fine | 0.03 | 0.18 | 0.00 | 1.00 | 173 |
| Fine Amount (MWK) | 7166.67 | 3188.52 | 3000.00 | 10000.00 | 6 |
| Total Cost of Infraction (MWK) | 1203.30 | 1647.86 | 0.00 | 10000.00 | 333 |
| <i>Control Variables</i> | | | | | |
| Temporary Road Block | 0.41 | 0.49 | 0.00 | 1.00 | 333 |
| No. of Officials | 3.61 | 1.65 | 0.00 | 8.00 | 333 |
| Hours Since 5am | 7.48 | 2.99 | 0.00 | 14.00 | 333 |

Figure B.2: Distribution of the size of bribes solicited in traffic police interactions.

Source: Data on the size of bribes solicited during the 173 observations in which the confederate’s vehicle was stopped.

Figure B.3: Distribution of the size of bribes solicited in traffic police interactions by treatment assignment.

Source: Data on the size of bribes solicited during the 173 observations in which the confederate’s vehicle was stopped.

B.2 Balance Tests

Table B.2: Covariate Balance by Socioeconomic Status Assignment

| | Low SES | High SES | Difference |
|----------------------|---------|----------|------------|
| Temporary Road Block | 0.386 | 0.437 | −0.052 |
| No. of Officials | 3.681 | 3.539 | 0.142 |
| Hours Since 5am | 7.560 | 7.401 | 0.159 |

Statistical differences determined by a two-tailed *t*-test.

* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table B.3: Covariate Balance by Political Connections Assignment

| | Not Connected | Connected | Difference |
|----------------------|---------------|-----------|------------|
| Temporary Road Block | 0.432 | 0.383 | 0.049 |
| No. of Officials | 3.630 | 3.582 | 0.049 |
| Hours Since 5am | 7.193 | 7.872 | −0.680** |

Statistical differences determined by a two-tailed *t*-test.

* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Appendix C Supplemental Results

C.1 Bribe Amount Analyses

Table C.1: The effects of socioeconomic status and political connections on the size of bribes solicited by traffic police officers.

| | Bribe Amount | | | |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | (1) | (2) | (3) | (4) |
| High SES | 163.496 (205.135) | −107.849 (257.331) | 138.364 (228.938) | 16.523 (275.523) |
| Political Connections | −302.176 (205.359) | −680.986 (299.530) | −433.701 (189.347) | −590.572 (274.986) |
| High SES × Connections | | 708.011 (409.810) | | 302.290 (381.972) |
| Coethnicity | 136.136 (210.694) | 148.885 (209.496) | −40.757 (205.069) | −28.677 (205.036) |
| Temporary Road Block | −134.550 (188.352) | −142.729 (187.225) | 2.481 (225.298) | −0.012 (224.731) |
| No. of Officials | 145.063 (60.332) | 134.204 (60.280) | 203.323 (67.771) | 199.504 (67.856) |
| Constant | 1365.427 (298.603) | 1426.978 (298.853) | 531.742 (401.368) | 593.224 (411.783) |
| Selection: DV=Stopped | | | | |
| Temporary Road Block | | | 0.057 (0.145) | 0.059 (0.145) |
| No. of Officials | | | 0.125 (0.043) | 0.124 (0.043) |
| High SES | | | −0.275 (0.141) | −0.273 (0.141) |
| Hours Since 5am | | | −0.087 (0.022) | −0.087 (0.022) |
| Constant | | | 0.352 (0.267) | 0.350 (0.267) |
| Observations | 167 | 167 | 327 | 327 |
| Censored Observations | | | 160 | 160 |
| ρ | | | 0.83 | 0.83 |
| Prob. χ^2 | | | 0.01 | 0.01 |

Note: The dependent variable in all models is a continuous measure of the amount of bribe solicited (in MWK), and is equal to zero when no bribe was solicited. Models 1 and 2 are estimated linearly and include confederate fixed-effects. Models 3 and 4 account for selection using a Heckman model in which time of day (Hours Since 5am) is used as an instrument for being stopped. Standard errors are reported in parentheses.

C.2 Robustness Analyses

Table C.2: The effects of socioeconomic status and political connections on bribe solicitation by traffic police officers (alternative specifications).

| | Stopped | Paid Bribe | | | |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | (1) | (2) | (3) | (4) | (5) |
| High SES | −0.456 (0.244) | −0.177 (0.691) | −0.305 (1.013) | 0.222 (0.333) | −0.100 (0.413) |
| Political Connections | | −1.198 (0.624) | −1.292 (0.838) | −0.594 (0.302) | −0.845 (0.402) |
| High SES × Connections | | | 0.226 (1.323) | | 0.594 (0.568) |
| Coethnicity | | 0.523 (0.707) | 0.536 (0.714) | −0.018 (0.294) | 0.007 (0.301) |
| Temporary Road Block | 0.057 (0.245) | −0.366 (0.632) | −0.367 (0.634) | −0.176 (0.315) | −0.194 (0.324) |
| No. of Officials | 0.245 (0.082) | −0.069 (0.215) | −0.077 (0.220) | −0.071 (0.111) | −0.087 (0.117) |
| Hours Since 5am | −0.138 (0.042) | | | | |
| Constant | | | | 1.454 (1.084) | 1.653 (1.169) |
| Selection: DV=Stopped | | | | | |
| Temporary Road Block | | | | 0.081 (0.148) | 0.081 (0.148) |
| No. of Officials | | | | 0.121 (0.044) | 0.121 (0.044) |
| High SES | | | | −0.288 (0.142) | −0.289 (0.142) |
| Hours Since 5am | | | | −0.090 (0.025) | −0.090 (0.025) |
| Constant | | | | 0.384 (0.279) | 0.383 (0.279) |
| Observations | 333 | 167 | 167 | 327 | 327 |
| Censored Observations | | | | 160 | 160 |
| ρ | | | | 0.45 | 0.43 |
| Prob. χ^2 | | | | 0.53 | 0.57 |

Note: The dependent variable in Model 1 is an indicator for whether or not the vehicle is stopped at the roadblock (Stopped). The dependent variable in Models 2-5 is an indicator for whether or not a bribe is solicited from a driver who is stopped (Paid a Bribe). Models 1-3 are estimated using a conditional logistic regression with confederate fixed-effects. Models 4 and 5 account for selection using a Heckman probit model in which time of day (Hours Since 5am) is used as an instrument for being stopped. Standard errors are reported in parentheses.

Table C.3: The effects of socioeconomic status and political connections on the outcome of interactions with traffic police officers.

| | (1) | | |
|-----------------------|-------------------|---------------------|-------------------|
| | Not Stopped | Stopped, No Payment | Stopped, Citation |
| High SES | 0.346 (0.236) | −0.605 (0.563) | 0.147 (0.894) |
| Political Connections | 0.294 (0.239) | 1.275 (0.566) | 0.595 (0.896) |
| Temporary Road Block | −0.270 (0.236) | 0.473 (0.551) | −0.052 (0.938) |
| No. of Officials | −0.167 (0.073) | 0.235 (0.160) | 0.447 (0.241) |
| Constant | 0.463 (0.334) | −3.800 (0.945) | −5.517 (1.565) |
| Observations | 333 | | |

Note: The dependent variable is a categorical classification of the outcome of the interaction with a traffic police officer, which include not being stopped, being stopped but not fined or asked for a bribe, being stopped and fined, or being stopped and asked for a bribe. The model is estimated using a multinomial logistic regression. Standard errors are reported in parentheses.

Appendix D Coethnicity and Bribe Solicitation

In addition to socioeconomic status and political connections, which were independently randomized and under full experimenter control, we also evaluated the effect of shared ethnicity on bribe solicitation. This treatment is not discussed in the body of the paper primarily because of space constraints, but we also note that coethnicity – unlike socioeconomic status and political connections – was not fully under experimenter control and was likely to be measured with considerable error. In the following sections, we outline our expectations and report the results of shared ethnicity on bribe solicitation by traffic police officers.

D.1 Coethnicity Hypotheses

We consider the role of ethnicity in shaping exposure to corruption. While ethnic diversity is weakly correlated with perceived levels of corruption cross-nationally (Mauro 1995; La Porta et al. 1999; Treisman 2007) and within countries (Glaeser and Saks 2006; Olken 2006), the mechanism behind this link is poorly understood. Some studies have focused on whether members of certain ethnic groups experience more corruption (e.g., Odhiambo 2015), but the effect of *shared* ethnicity has received less attention. In Nigeria, Smith (2001) finds that Igbos engage with other Igbos in order to facilitate corrupt exchanges, but the study is unable to separate any potential group effect from the dyadic effect of shared ethnicity.

To explore how shared ethnicity might affect corruption exposure, we consider both ethnic-based altruism and perceptions of coethnic trustworthiness. Because individuals tend to display higher levels of favoritism toward coethnics (Bernhard, Fischbacher, and Fehr 2006), we might expect to see less corruption targeted at in-group members. However, individuals also display higher levels of trust in members of their own ethnic group (Barr 2004; Fershtman and Gneezy 2001; Robinson 2017a), which could increase the perceived credibility of coethnic citizens – an important facilitator of corrupt transactions when risks are high (Treisman 2000). Thus, we anticipate that when risk of retribution is low, shared ethnicity will reduce exposure to corruption (**H3a**), but when risk of retribution is high, shared ethnicity will increase exposure to corruption (**H3b**). Our pre-analysis plan thus outlined the

expectation that ethnicity would reduce exposure to bribery in decentralized institutional contexts, but would increase exposure in highly centralized institutional contexts. As discussed in the pre-analysis plan, we anticipated that the traffic police context constitutes a lower-risk, decentralized institution, while electricity service offices were more centralized and therefore higher risk.

D.2 Measuring Coethnicity

Ethnic match between the research confederate and the public official was only randomized to the degree that randomized route sequencing induced variation in the ethnicities encountered. Each of our confederates was coded on ethnicity and region of origin; they in turn coded the ethnicity and region of origin of the public officials with whom they interacted using surname (when available), language or accent, appearance, and information shared by the official.

This coding of ethnicity is likely to be measured with considerable error, as “ethnic visibility” varies across individuals and groups (Robinson 2017b), and traffic police officers explicitly mentioned their own ethnicity in only 10% of all interactions. Indeed, our confederates reported low confidence in their judgment of traffic police officers’ ethnicities in 41% of interactions. Government officials also inevitably perceived the ethnicity of our confederates with some degree of error, although public officials should be able to more accurately judge the confederates’ ethnicities, given that they typically had more information, especially the researchers’ surnames. Overall, we anticipate that ethnicity was reasonably identifiable in the personal interactions that constitute our experiment, because both physical appearance and speech are observable face-to-face interactions, and these pieces of information increase ethnic identifiability considerably (Habyarimana et al. 2009).

We used the data provided by the research confederates to construct an indicator for ethnic match that takes a value of 1 if the public official and confederate are from the same region. We rely on a regional definition of shared ethnicity, because regional identities within Malawi have been the most salient form of ethnic identity (Ferree and Horowitz 2010; Posner 2004).¹

¹We also coded shared ethnicity based on tribe. However, given subject identifiability and data confidentiality concerns, confederates only classified public officials as members of one of the three largest groups (Chewa, Tumbuka, or Yao) or as belonging to an “other” tribe. We were therefore able to code tribe-based coethnicity for only half of the confederates.

D.3 Coethnicity Results

Confederates interacted with coethnic officials in 29% of traffic police interactions. Contrary to H3a, we find no evidence in the traffic police context that shared ethnicity is related to the likelihood of paying a bribe after a vehicle is stopped (86% for coethnics and 88% for non-coethnics, Fischer’s exact test, one-sided $p = 0.487$) or the average amount of bribe extracted (2,128 MWK for coethnics vs. 2,043 MWK for non-coethnics, Wilcoxin rank-sum $z = 0.590$, $p = 0.555$). Table 1 in the main paper and appendix Table C.1 similarly show no effect of shared ethnicity on exposure to corruption after controlling for other treatments and covariates.

Appendix E Ethical Considerations

The human subjects in our research design are the public officials (Malawian traffic police and ES-COM officials) with whom the research confederates interacted. We argued above that using a field experimental approach to studying their behavior gives us the best opportunity to understand the true impact of political connections, socioeconomic status, and shared ethnicity on the solicitation of bribes. However, like most field experiments, our approach raises three particular ethical concerns: waiving informed consent, the use of deception, and the weighting of risks and benefits. We – and the ethics boards that reviewed our proposal – carefully considered each of these concerns prior to implementing the research; we discuss our strategy for dealing with each in turn.

E.1 Informed Consent

Most field experiments do not include methods of informed consent on the part of participants, since they seek to observe real world behavior without interference by the researcher. Consistent with this norm, our research design did not include asking each individual official to consent to participate in the study. We felt that the waiving of informed consent in this study was justified for five reasons. First, the research posed minimal risk to participants, as we observed the officials in their typical day-to-day activities without any additional intervention. Second, the waiver did not adversely affect the rights and welfare of the subjects, and in fact, obtaining their consent might have done more harm. Third, the research could not have been carried out without waiving informed consent, since the behavior we sought to observe is highly vulnerable to social desirability bias. Fourth, we had plans in place to provide additional pertinent information to participants in the event that it was required. Finally, we were observing public officials in their normal daily duties and, as public officials, they are charged with protecting the public interest, which means that they anticipate an increased level of scrutiny compared to normal citizens.²

²There is an ongoing discussion regarding the use of public officials as research subjects. The most recent piece on this topic is McClendon (2012*b*). She summarizes the justification for these studies, concluding that they contribute to knowledge about political behavior, which in turn offers important insight for improving political institutions and enacting more effective policy: “The behavior of public officials has a wide impact on many individuals and groups. For this reason we should want accurate and rich information about the drivers of such behavior and about whether such behavior

E.2 Deception

Many field experiments – and virtually all field experiments seeking to understand discrimination – have involved some form of deception (Riach and Rich 2004). Classic studies of racial or gender discrimination in hiring utilized fictitious applicants (see Riach and Rich 2002, for a review), and more recent research on the responsiveness of public officials have created fictitious constituents (Butler and Broockman 2011; Loewen and MacKenzie Forthcoming; McClendon 2016a). In both bodies of research, the studies’ participants (companies and elected officials) were deceived by researchers, since the research confederates did not represent real job seekers or real constituents with complaints. Similarly, in our study, the traffic police officers manning roadblocks or the officials staffing ESCOM offices did not know that the research confederates were passing through their roadblock or entering their offices in order to observe the officials’ behavior towards them as part of a research study.

One of the key ethical considerations in using deception in field experiments of discrimination is whether or not the behavior of research assistants (often called *agents*) is consistent with the behavior of the types of individuals they impersonate (Riach and Rich 2004). In the case of our experiment, then, it is important that the research confederates behavior be consistent with and typical of behavior exhibited by average Malawians passing through traffic police roadblocks or entering ESCOM offices. Based on our own experience, and qualitative research carried out prior to the field experiment, drivers are typically asked by traffic police to pay a small bribe to avoid being cited for infractions, and a timely ESCOM connection is nearly impossible without paying a bribe. In addition, there is a widespread belief that the Malawian Anti-Corruption Bureau sends “undercover agents” to interact with public employees in order to identify corruption. Traffic police and ESCOM employees thus have some expectation of observation. Thus, we felt that the trained research confederates in our study did not introduce novel behavior or deviate from standard practice.

is accountable and equitable” (McClendon 2012b, p. 18).

E.3 Minimizing Potential Risks

A central ethical obligation of researchers working with study participants is to ensure that the benefits of a particular research project outweigh the risks it entails (Office for Human Research Protections 2009). Risk of harm – physical, psychological, social, or economic – should be minimized in terms of both the likelihood and the magnitude of harm. This research posed potential risks to our participants (traffic police officers and ESCOM employees in Malawi observed during our study), non-participant traffic police officers and ESCOM employees, and the research confederates employed on our study.

The first potential harm for public officials in our study was an increased workload resulting from the additional drivers and ESCOM applicants. However, this potential harm was very minimal in our study. First, the time requirement for each of our observations was very small, as was the overall number of observations. Second, as with many field experiments involving public officials (McClendon 2012*b*), the time spent interacting with the research confederates diverts attention from other citizens of Malawi, so it’s the average citizen who pays this cost, rather than the participant. This cost is both small – an additional citizen or two per day is unlikely to substantially affect the waiting time or services received for other drivers or others visiting ESCOM offices – and paid by those with the most to gain from the findings of this study: Malawian citizens.

The second potential harm to our participants is that traffic police officers or ESCOM employees could be sanctioned for corrupt behavior observed in our study, since the solicitation of a bribe in either context is illegal under Malawian law (Corrupt Practices Act 1995). However, this risk is already present when engaging in corrupt behavior that could be observed by anti-corruption stakeholders such as the Malawian Anti-Corruption Bureau, the University of Malawi’s Centre for Social Research, or Transparency International. There already exists scrutiny of corrupt behavior by the Anti-Corruption Bureau, and the illegality of such corruption is clearly stated in the Corrupt Practices Act of 1995 and the National Anti-Corruption Strategy of 2008. Because we are not soliciting corrupt behavior in any way, we are not raising the risk of general sanctions to participants who in engage in corrupt behavior beyond that to which they have chosen to expose themselves. Despite this, we still took measures to effectively eliminate this risk at the individual level by never record-

ing any identifying information (e.g., names, date/times of interactions with participants, or minority ethnicity information). Further, in the dissemination of our research findings, results have only ever been presented in aggregation such that interested parties (such as the Anti-Corruption Bureau, the General Inspector, or the head of ESCOM) cannot target sanctions toward individuals or units. Before engaging in the research study, the research confederates signed a statement pledging to uphold data confidentiality and promising to never discuss the corruption they observe or report participants in our study for corrupt behavior.³

The potential risk of punitive measures in response to our research could harm not only the officials in our study who solicited bribes, but also participants in our study who did not solicit bribes and non-participants who share an occupation with our participants. In other words, because we protect information that would allow for the identifiability of actual participants, and thus targeted punishment, some risks of our research cannot be limited to our participants alone. After being briefed on our findings, the Anti-Corruption Bureau or another anti-corruption stakeholder in Malawi could take a punitive measure such as reducing the remuneration of all traffic police and ESCOM officials. In order to minimize this risk, we made no recommendations for punitive measures against discriminatory corrupt practices in our reports to stakeholders in Malawi. If an institution or organization chooses to undertake general sanctions as a result of the study, such actions are within the rights of the government and the public at large. We felt that the requirement to protect the identity of participants, especially when informed consent is waived, and the potential benefits of the study to Malawian society as a whole, outweighed the cost of potential harm to non-participants.

Finally, our research posed (perhaps the greatest) risks to the research confederates who acted as confederates in our study. In line with standards in the field, we were fully transparent on the aims of the research with the research con, and regularly solicited their input in the design and execution of the study. Despite this, we were nonetheless sensitive to the risks affecting them. First, driving around 2000kms in five days exposed the research confederates to the possibility of a traffic accident. To minimize this risk, the research confederates were never asked to do anything that put

³While reporting is encouraged by the Anti-Corruption Bureau, individuals are not required by Malawian law to report observed instances of corruption (Corrupt Practices Act 1995).

them at risk above and beyond the normal risk associated with driving a motor vehicle in compliance with all traffic laws. Second, there could be negative consequences of accumulating traffic violations across the country. However, the Malawian traffic police do not maintain permanent records of any kind on drivers in Malawi. Third, the research confederates could face repercussions for engaging in corruption, which, although widespread, could be perceived negatively. To minimize this risk, the research confederates were trained to never ask to pay or suggest paying a bribe; as a result, any corrupt interaction only occurred when initiated by the government official. Fourth, researchers could have been put at risk if one of the traffic police or ESCOM officials somehow became aware that they were recording information about a corrupt interaction for the purposes of research. The recording of information about corruption by the research confederates is well within their rights as both citizens (this recording of information is encouraged by the Anti-Corruption Bureau) and as researchers working on a government-approved project. The research confederates were nevertheless trained to only enter information into their phone after the end of an interaction (after driving away from a roadblock interaction and parking safely off the road, or leaving the ESCOM office), thus minimizing any risks associated with being identified as engaging in research. As a last resort, the research confederates also carried documentation explaining the research project and their role in it as well as the approval letter granted by Malawi’s National Commission on Science and Technology, although these documents were never used during the study.

Appendix F Data Collection Instruments

F.1 ODK Fields for Roadblocks

For each traffic police roadblock that a confederate passed through, he recorded the following information: **NOTE: Fill out the form about the officer who was the decision-maker about whether or not you paid, and if so, how much it was.**

1. GPS coordinates of data entry **NOTE: If you cannot get GPS on your phone for an observation, try to drive where you can get it. If you still cannot get GPS on your phone, then write down the approximate location of the roadblock in your exercise book.**
2. Name (allow only one answer)
 - (a) RA 1
 - (b) RA 2
 - (c) RA 3
 - (d) RA 4
 - (e) RA 5
 - (f) RA 6
3. Day of Data Collection (allow only one answer) **NOTE: Never write down the date and time of the interactions. Use only “day 1, roadblock 2” notation.**
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
 - (e) 5
 - (f) 6+
4. SES (allow only one answer)
 - (a) Rich
 - (b) Poor
5. Power (allow only one answer)
 - (a) Connected
 - (b) Not Connected
6. Roadblock Type
 - (a) Permanent
 - (b) Temporary (Haphazard)
7. Number of Officers Present (open field) **NOTE: Do not be obvious as you collect this information.**
8. Did any officer at the roadblock recognize you personally? (allow only one answer) **NOTE: Only answer “yes” to this question if an officer recognized you, but not if you recognized an officer and he didn’t seem to see you.**
 - (a) Yes
 - (b) No
 - (c) DK
9. Was your vehicle stopped? (allow only one answer) **NOTE: “Stopped” here means if you begin to have a conversation about a violation with an officer.**
 - (a) Yes
 - (b) No - END FORM
10. Did the officer ask where you were going, with you answering according to the script? (allow only one answer) **NOTE: Only answer “yes” to this question if the officer asked you.**
 - (a) Yes - SKIP TO NUMBER 12
 - (b) No
11. Did you manage to mention you were rushing to a meeting according to the script? (allow only one answer) **NOTE: If the officer did not ask you where you were going, then please try to bring this up in conversation naturally.**
 - (a) Yes
 - (b) No

12. Did the officer ask your profession, with you answering according to the script? (allow only one answer) **NOTE: Only answer “yes” to this question if the officer asked you.**
 - (a) Yes - SKIP TO NUMBER 14
 - (b) No
13. Did you manage to mention your profession according to the script? (allow only one answer) **NOTE: If the officer did not ask you your profession, then please try to bring this up in conversation naturally.**
 - (a) Yes
 - (b) No
14. Which items did the officer check? *Select all that were checked. Multiple answers allowed.*
 - (a) Driver’s license
 - (b) Insurance disc
 - (c) Registration
 - (d) COF
 - (e) Triangles
 - (f) Other (allow for open field entry here)
15. Did the officer verbally note the missing insurance disc? (allow only one answer) **NOTE: It is important that you only answer “yes” to this question if the officer has said something out loud, and that you answer “no” if they notice the disc but do not say anything.**
 - (a) Yes
 - (b) No - SKIP TO NUMBER 17
16. Did the officer mention the missing disc before or after you said your profession and where you were going? (allow only one answer) **NOTE: You should answer “before” to this question if you’ve said your profession, you’ve said where you are going, or you’ve said both your profession and where you are going.**
 - (a) Before
 - (b) After
17. Did the officer state there was a fine for a missing insurance disc? (allow only one answer) **NOTE: You should answer “yes” if the officer states an amount or if the officer simply states that there is a fine associated with the violation.**
 - (a) Yes
 - (b) No - SKIP TO NUMBER 19
18. Did the officer state there was a fine for a missing disc before or after you said your profession and where you were going? (allow only one answer) **NOTE: You should answer “before” to this question if you’ve said your profession, you’ve said where you are going, or you’ve said both your profession and where you are going.**
 - (a) Before
 - (b) After
19. When you said you didn’t have the money, did the officer initiate negotiations for a bribe? (allow only one answer) **NOTE: “Initiation” occurs whenever an officer indicates that he is open to corruption, whether through what he says or what he does.**
 - (a) Yes
 - (b) No - SKIP TO NUMBER 21
20. Did the officer initiate negotiations for a bribe before or after you said your profession and where you were going? (allow only one answer) **NOTE: You should answer “before” to this question if you’ve said your profession, you’ve said where you are going, or you’ve said both your profession and where you are going.**
 - (a) Before
 - (b) After
21. Did you state an amount of money that you had? (allow only one answer) **NOTE: You should state K1500 for a discussion about a violation and K200 for a discussion about a favor, such as buying a coke for an officer.**
 - (a) Yes
 - (b) No
22. Did you pay a bribe? *A bribe is less than the fine and not accompanied by a receipt.* (allow only one answer)
 - (a) Yes
 - (b) No - SKIP TO NUMBER 24
23. Amount of bribe: (open field) - SKIP TO NUMBER 26
24. Did you pay the full fine? *If you received the fine, you should receive a receipt.* (allow only one answer)
 - (a) Yes

- (b) No - SKIP TO NUMBER 26
25. Amount of fine: (open field)
26. Languages Used in Interaction *Select all that were checked. Multiple answers allowed.*
- (a) Chichewa
 - (b) Tumbuka
 - (c) Yao
 - (d) English
 - (e) Other (allow for open field entry here)
27. Was there any discussion about ethnicity or the place that you or the officer comes from? (allow only one answer)
NOTE: Any discussion about ethnicity or the place you come from should be casual and natural.
- (a) Yes
 - (b) No
28. What was the officer’s tribe? (allow only one answer) **NOTE: A longer version of this question would ask, “If you had to guess, what do you think the officer’s tribe is?”**
- (a) Chewa
 - (b) Tumbuka
 - (c) Yao
 - (d) Other
29. How confident are you in rating the officer’s tribe? (allow only one answer)
- (a) Not Confident At All
 - (b) Uncertain
 - (c) Confident
 - (d) High Confident
30. What information did you use in determining the officer’s tribe? *Select all that were checked. Multiple answers allowed.*
- (a) Language or Accent
 - (b) Surname
 - (c) Region of Interaction
 - (d) Region from Which Officer Comes
 - (e) Specific place from Which Officer Comes
 - (f) Appearance
 - (g) Was Told Directly
31. What region is the officer from? (allow only one answer)
- (a) North
 - (b) Center
 - (c) South
32. How confident are you in rating the officer’s region? (allow only one answer)
- (a) Not Confident At All
 - (b) Uncertain
 - (c) Confident
 - (d) Highly Confident
33. What information did you use in determining the officer’s home region? *Select all that were checked. Multiple answers allowed.*
- (a) Language or Accent
 - (b) Surname
 - (c) Region of Interaction
 - (d) Region from Which Officer Comes
 - (e) Specific place from Which Officer Comes
 - (f) Appearance
 - (g) Was Told Directly
34. Were there any deviations from the prescribed information in what you said? (allow only one answer) *Either things you were supposed to say but were not able, or things you were not supposed to say but had to. NOTE: Also answer “yes” if anything weird or unusual happens.*
- (a) Yes
 - (b) No - SKIP TO NUMBER 36

35. What were the deviations? (open field)
36. Did the officer raise his or her voice or become angry at any point? (allow only one answer) **NOTE: Answer “yes” to this question if you feel threatened.**
 - (a) Yes
 - (b) No
37. Do you think that the officer believed your performance (SES and connections as assigned) or was he suspicious? (allow only one answer) **NOTE: If you think the officer is suspicious for any reason, including if he or she has noticed that six people have come through and done the same thing over the last few days, be sure you note this in question 34**
 - (a) Believed completely
 - (b) A bit suspicious
 - (c) Did not believe at all
38. Did you show the letters about the research or tell the officer about the research in any way? (allow only one answer) **NOTE: If you ever answer “yes” to this question, we have to cancel the study. Notify us immediately.**
 - (a) Yes
 - (b) No
39. Were any other officers listening to or watching the interaction? (allow only one answer)
 - (a) Yes
 - (b) No - SKIP TO NUMBER 41
40. Was a superior police officer (a boss) listening to or watching the interaction? (allow only one answer)
 - (a) Yes
 - (b) No
41. Did the officer consult with any other officers? (allow only one answer)
 - (a) Yes
 - (b) No - SKIP TO NUMBER 43
42. Was one of the other officers who was consulted a superior police officer (a boss)? (allow only one answer)
 - (a) Yes
 - (b) No
43. Were any other drivers listening to or watching the interaction? (allow only one answer)
 - (a) Yes
 - (b) No
44. Approximately how many minutes was the interaction? (allow only one answer)
 - (a) Under 2 Minutes
 - (b) 2-5 Minutes
 - (c) 5-10 Minutes
 - (d) More than 10 Minutes

Appendix G Results Based on Pre-Analysis Plan

In this section, we report the results of the analyses as they were specified in the pre-analysis plan that was filed in June 2014. The analyses reported in Table E.1 are based as closely as possible on the analyses that were laid out in the pre-analysis plan. However, our plan for the inclusion of control variables would introduce post-treatment bias. Thus, in the results presented below, we include only pre-treatment control variables. In addition, we exclude the 10 observations in which the police officer recognized the confederate personally, as treatments were not viable under such circumstances.

In the table below, the first two columns provide a mapping from the pre-analysis plan’s hypotheses (P #) to the hypotheses outlined in the main manuscript (M #).

On the whole, we believe that the results summarized in Table E.1 provide a clear sense of the results of the pre-specified tests. In the main manuscript, we further deviate from the PAP for the sake of clarity and brevity, as well as to use more appropriate statistical tools.

Table E.1: Results of Pre-Specified Analyses for Traffic Police Interactions

| M # | P # | Context | Hypothesis | DV | IV | Sample | Bivariate | Regression | Coef. (SE) | Conclusion |
|-----|-----|--------------|--|------------------|-----------------------|----------------------------------|---|--|-------------------------------|------------|
| H1 | H1 | Road Traffic | High SES will reduce the likelihood of being stopped. | Stopped (0,1) | High SES (0,1) | Full sample, $n = 333$ | 0.572 vs. 0.467 One-sided t-test $t = 1.927, p = 0.027$ | Linear prob. model Controls: road block type, no. of officers, RA fixed-effects | -0.090 (0.056) $p = 0.108$ | Consistent |
| | H2 | Road Traffic | Political connections will reduce the likelihood of being stopped. | Stopped (0,1) | Connected (0,1) | Full sample, $n = 333$ | 0.547 vs. 0.482 One-sided t-test $t = 1.165, p = 0.123$ | Linear prob. model Controls: SES, road block type, no. of officers, RA fixed-effects | -0.014 (0.058) $p = 0.815$ | No effect |
| | H3 | Road Traffic | Ethnic match will decrease the likelihood of paying a bribe. | Paid Bribe (0,1) | Weak Coethnic (0,1) | Stopped, $n = 173$ | 0.877 vs. 0.863 One-sided t-test $t = 0.256, p = 0.399$ | Linear prob. model Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.030 (0.056) $p = 0.597$ | No effect |
| | | | | Paid Bribe (0,1) | Strong Coethnic (0,1) | Stopped, Non-Minority, $n = 156$ | 0.885 vs. 0.962 One-sided t-test $t = 1.178, p = 0.880$ | Linear prob. model Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.019 (0.069) $p = 0.780$ | No effect |
| | H4 | Road Traffic | Ethnic match will decrease the likelihood of paying the full fine. | Paid Fine (0,1) | Weak Coethnic (0,1) | Stopped, $n = 173$ | 0.033 vs. 0.039 One-sided t-test $t = 0.210, p = 0.583$ | Linear prob. model Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.007 (0.033) $p = 0.821$ | No effect |

Table E.1: Results of Pre-Specified Analyses for Traffic Police Interactions (continued)

| M # | P # | Context | Hypothesis | DV | IV | Sample | Bivariate | Regression | Coef. (SE) | Summary |
|-----|-----|--------------|--|--------------------------|---|----------------------------------|---|---|-------------------------------|---------------|
| | | | | Paid Fine (0,1) | Strong Coethnic (0,1) | Stopped, Non-Minority, $n = 156$ | 0.031 vs. 0.000 One-sided t-test $t = 0.903, p = 0.184$ | Linear prob. model Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | -0.027 (0.037) $p = 0.460$ | No effect |
| | H5 | Road Traffic | The impact of ethnic match on the likelihood of paying the full fine will be larger, in absolute value, than the effect of ethnic match on the likelihood of paying a bribe. | Paid (0,1) | Weak Coethnic (0,1); Payment Type (0=Citation, 1=Bribe) | Stopped, $n = 173$ | 0.006 vs. -0.014 Diff-in-Diff $t = 0.330, p = 0.745$ | Linear prob. model w/ interaction Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | -0.021 (0.063) $p = 0.742$ | No difference |
| | | | | Paid (0,1) | Strong Coethnic (0,1); Payment Type (0=Citation, 1=Bribe) | Stopped, Non-Minority, $n = 156$ | -0.031 vs. 0.077 Diff-in-Diff $t = 1.46, p = 0.145$ | Linear prob. model w/ interaction Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.108 (0.073) $p = 0.144$ | Inconsistent |
| H1 | H6 | Road Traffic | Political connections will increase (<i>decrease</i>) the likelihood of paying nothing and being released with a warning (<i>paying a fine or bribe</i>). | Paid Fine or Bribe (0,1) | Connected (0,1) | Stopped, $n = 173$ | 0.943 vs. 0.853 One-sided t-test $t = 2.006, p = 0.023$ | Linear prob. model Controls: SES, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | -0.100 (0.048) $p = 0.039$ | Consistent |

Table E.1: Results of Pre-Specified Analyses for Traffic Police Interactions (continued)

| M # | P # | Context | Hypothesis | DV | IV | Sample | Bivariate | Regression | Coef. (SE) | Summary |
|-----|-----|--------------|---|--------------------------|-----------------|---------------------------------|---|---|-------------------------------|------------|
| | H7 | Road Traffic | Political connections will increase the likelihood of paying the full fine. | Paid Fine (0,1) | Connected (0,1) | Stopped, $n = 173$ | 0.029 vs. 0.044 One-sided t-test $t = 0.543, p = 0.294$ | Linear prob. model Controls: SES, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.016 (0.032) $p = 0.624$ | No effect |
| H1 | H8 | Road Traffic | Political connections will decrease the likelihood of being asked to pay a bribe. | Paid Bribe (0,1) | Connected (0,1) | Stopped, $n = 173$ | 0.914 vs. 0.809 One-sided t-test $t = 2.046, p = 0.021$ | Linear prob. model Controls: SES, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | -0.116 (0.055) $p = 0.037$ | Consistent |
| H2 | H9 | Road Traffic | High SES will decrease (<i>increase</i>) the likelihood of of paying nothing and being released with a warning (<i>paying a fine or bribe</i>). | Paid Fine or Bribe (0,1) | High SES (0,1) | Stopped, $n = 173$ | 0.895 vs. 0.923 One-sided t-test $t = 0.637, p = 0.262$ | Linear prob. model Controls: connected, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.011 (0.048) $p = 0.819$ | No effect |
| | H10 | Road Traffic | High SES will increase the likelihood of paying the full fine. | Paid Fine (0,1) | High SES (0,1) | Stopped, $n = 173$ | 0.032 vs. 0.038 One-sided t-test $t = 0.245, p = 0.404$ | Linear prob. model Controls: connected, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.011 (0.032) $p = 0.730$ | No effect |
| H2 | H11 | Road Traffic | High SES will increase the likelihood of being asked to pay a bribe, but only in the absence of political connections. | Paid Bribe (0,1) | High SES (0,1) | Stopped, Connected=0, $n = 105$ | 0.900 vs. 0.943 One-sided t-test $t = 0.734, p = 0.232$ | Linear prob. model Controls: weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | 0.038 (0.065) $p = 0.560$ | No effect |

Table E.1: Results of Pre-Specified Analyses for Traffic Police Interactions (continued)

| M # | P # | Context | Hypothesis | DV | IV | Sample | Bivariate | Regression | Coef. (SE) | Summary |
|-----|-----|--------------|---|-----------------------|-----------------------|----------------------------------|---|--|---------------------------------|--------------|
| | | | | Paid Bribe (0,1) | High SES (0,1) | Stopped, Connected=1, $n = 68$ | 0.760 vs. 0.837 One-sided t-test $t = 0.773, p = 0.221$ | Linear prob. model Controls: weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | -0.213 (0.098) $p = 0.034$ | Inconsistent |
| | H12 | Road Traffic | Ethnic match will decrease the amount of the bribe paid. | Bribe Amount (0-5000) | Weak Coethnic (0,1) | Stopped, $n = 173$ | 2043 vs. 2127 One-sided t-test $t = 0.394, p = 0.653$ | OLS model Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | 162.89 (217.65) $p = 0.455$ | No effect |
| | | | | Bribe Amount (0-5000) | Strong Coethnic (0,1) | Stopped, Non-Minority, $n = 156$ | 2040 vs. 2154 One-sided t-test $t = 0.433, p = 0.667$ | OLS model Controls: SES, connected, road block type, no. of officers, presence of superior officer, RA fixed-effects | 177.27 (269.78) $p = 0.512$ | No effect |
| H1 | H13 | Road Traffic | Political connections will decrease the amount of the bribe paid. | Bribe Amount (0-5000) | Connected (0,1) | Stopped, $n = 173$ | 2197 vs. 1868 One-sided t-test $t = 1.652, p = 0.050$ | OLS model Controls: SES, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | -396.41 (214.17) $p = 0.066$ | Consistent |
| H2 | H14 | Road Traffic | High SES will increase the amount of the bribe paid. | Bribe Amount (0-5000) | High SES (0,1) | Stopped, $n = 173$ | 1981 vs. 2173 One-sided t-test $t = 0.976, p = 0.165$ | OLS model Controls: connected, weak coethnicity, road block type, no. of officers, presence of superior officer, RA fixed-effects | 132.58 (210.92) $p = 0.531$ | No effect |

References

- Barr, Abigail. 2004. "Kinship, Familiarity, and Trust: An Experimental Investigation." In *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. Oxford University Press pp. 305–334.
- Bernhard, Helen, Urs Fischbacher, and Ernst Fehr. 2006. "Parochial altruism in humans." *Nature* 442(7105): 912–915.
- Butler, Daniel M., and David E. Broockman. 2011. "Do Politicians Racially Discriminate Against Constituents? A Field Experiment on State Legislators." *American Journal of Political Science* 55(3): 463–477.
- Corrupt Practices Act. 1995. "Republic of Malawi."
- Ferree, Karen, and Jeremy Horowitz. 2010. "Ties that Bind? The Rise and Decline of Ethno-Regional Partisanship in Malawi, 1994–2009." *Democratization* 17(3): 534–563.
- Fershtman, Chaim, and Uri Gneezy. 2001. "Discrimination in a Segmented Society: An Experimental Approach." *The Quarterly Journal of Economics* 116(1): 351–377.
- Office for Human Research Protections. 2009. "Protection of Human Subjects Regulations." <http://www.hhs.gov/ohrp/policy/ohrpreulations.pdf>.
- Glaeser, Edward L, and Raven E Saks. 2006. "Corruption in America." *Journal of Public Economics* 90: 1053–1072.
- Habyarimana, James, Macartan Humphreys, Daniel N. Posner, and Jeremy M. Weinstein. 2009. *Co-ethnicity*. New York, NY: Russel Sage Foundation.
- La Porta, Rafael, Florencio Lopez-de Silanes, Andrei Shleifer, and Robert Vishny. 1999. "The Quality of Government." *Journal of Law, Economics, and Organization* 15(1): 222–279.
- Loewen, Peter, and Michael MacKenzie. Forthcoming. "Service Representation in a Federal System: A Field Experiment." *Journal of Experimental Political Science*.
- Mauro, Paolo. 1995. "Corruption and Growth." *The Quarterly Journal of Economics* 110(3): 681–712.
- McClendon, Gwyneth. 2016a. "Race and Responsiveness: An Experiment with South African Politicians." *Journal of Experimental Political Science* 3(1): 60–74.
- McClendon, Gwyneth. 2012b. "Ethics of Using Public Officials As Field Experiment Subjects." *Newsletter of the APSA Experimental Section* 3(1): 13–20.
- Odhiambo, Fredrick Onyango. 2015. "Determinants of Corruption in Kenya: Born and Bred to Bribe." *Social Sciences* 4(6): 134–141.
- Olken, Benjamin A. 2006. "Corruption and the Costs of Redistribution: Micro Evidence from Indonesia." *Journal of Public Economics* 90: 853–870.

- Posner, Daniel N. 2004. "The Political Salience of Cultural Difference: Why Chewas and Tumbukas are Allies in Zambia and Adversaries in Malawi." *American Political Science Review* 98(4): 529–545.
- Riach, Peter A., and Judith Rich. 2002. "Field Experiments of Discrimination in the Market Place." *The Economic Journal* 112(November): F480–F518.
- Riach, Peter A., and Judith Rich. 2004. "Deceptive Field Experiments of Discrimination: Are They Ethical?" *Kyklos* 57(August): 457–470.
- Robinson, Amanda Lea. 2017a. "Ethnic Diversity, Segregation, and Ethnocentric Trust in Africa." *British Journal of Political Science* First View: 1–23.
- Robinson, Amanda Lea. 2017b. "Ethnic Visibility." *CP: Newsletter of the Comparative Politics Organized Section of the American Political Science Association* 27(2): 79–89.
- Smith, Daniel Jordan. 2001. "Kinship and corruption in contemporary Nigeria." *Ethnos* 66(3): 344–364.
- Treisman, Daniel. 2000. "The Causes of Corruption: A Cross-National Study." *Journal of Public Economics* 76(June): 399–457.
- Treisman, Daniel. 2007. "What Have We Learned about the Causes of Corruption from Ten Years of Cross-National Empirical Research?" *Annual Review of Political Science* 10(June): 211–244.