

Calling Mogadishu: How Reminders of Anarchy Bias Survey Participation

Abstract

How does the fear of anarchy affect telephone survey behaviors? A survey experiment administered to a large sample of Mogadishu residents – validated with a natural experiment – are used to assess this question. Randomly-assigned reminders of anarchic violence conditioned differential effects on survey participation, depending on a subjects' background level of security and welfare. Vulnerable subjects are more likely to refuse to provide sensitive survey information after reminders of anarchy.

Word Count (excluding Abstract & Bibliography): 2555

Summary

How does acute fear of anarchic violence affect the survey behavior of subjects residing in active war zones? We answer this question through an examination of telephone survey behaviors for a sample residing in contemporary Mogadishu, the capital city of Somalia.

Mogadishu is, as of this writing, a theater of violent competition for political power. While conducting an apolitical panel telephone survey on citizen well-being, we embedded a survey experiment that varied whether respondents received a survey prime that framed recent events in the city as violent and anarchic, or as state consolidation (or given no prime at all). We then immediately asked our most sensitive survey question: whether respondents would be willing to disclose their clan. We measured non-response in order to make inferences about respondent fear. To increase our confidence in the validity of the finding, we leveraged a natural experiment – a major attack on Somalia’s Parliament – to examine whether the reminders of violent anarchy in the real world caused the same responses as the artificial survey experiment. In both the survey experiment and the natural experiment, the threat of anarchy depressed survey participation disproportionately for the vulnerable.

1 Theory: How Insecurity and Fear Alter Survey Behaviors

Emotions filter incoming information and condition responses in a way that can alter survey behaviors. Anxiety and fear induce risk-adverse behaviors (Lerner and Keltner 2001) that correlate with more conservative policy preferences with respect to security (Lerner et al. 2003; Getmansky and Zeitzoff 2014) and lower political engagement (Hassell and Settle 2016). Exposure to violence has myriad effects other than fear, and recollections of past violence can alter risk preferences even long after the fact (Eckel, El-Gamal, and Wilson 2009; Voors et al. 2012; Callen et al. 2014; Cameron and Shah 2015). Immediate, acute fear-induced stress – which can be experimentally manipulated – has been shown to create a

“fight or flight” response, which disrupts the normal survey ritual. Changes in behavior are most easily observed in the form of non-response when fear primes interact with respondents’ background level of well-being (Huddy et al. 2005).¹ Chronically vulnerable populations are more susceptible to fear than their secure counterparts (Levine 2015).

A contemporary Somali sample magnifies the salience of these concerns. Subjects living in war zones are strategic about whether to share information and with whom (Lyall, Shiraito, and Imai 2015). Revealing attitudes on sensitive matters, even over the phone, carries danger (Blair et al. 2013).² More generally, the motives of social scientists who take an interest in Somali politics could not be verified. Our research team was viewed skeptically by many of our Somali subjects – and reasonably so. To the extent we were neutral observers we could be accused of engaging in virtual poverty tourism. But to the extent we were something *other than* neutral observers, we were partisans. In a setting where famine has been used as a weapon for decades, charity cannot be seen as politically neutral. Nor is data collection a pure public good, since a census could potentially lock in de-facto property rights for the war’s winners. The decision by subjects to stay on the phone and answer questions was weighed against the option of hanging up to remain invisible.

Our theoretical expectation was that acute fear, induced by reminders of the surrounding anarchic environment, would decrease survey participation *especially for* the most vulnerable respondents in our sample. The low welfare members of our sample were more

¹ Studies that make use of non-response, “don’t know,” or “refuse-to-answer” survey behaviors include Berinsky (2004), Berinsky & Tucker (2006), Jessee (2015), and AUTHOR.

² Though Shapiro and Weidmann (2015) suggest a widespread prior belief that cellular phone communication is private and secret, our experience with surveying Somalis by phone suggests a different set of priors. Most of the Somalis we have talked to admit a belief that agents of both the Somali government and the U.S. government, as well as agents of the Al Shabaab rebel group, monitor electronic communications.

likely to lack political protection, connections, and representation. They were, we reasoned, more likely to have an emotional response to reminders of political instability that would leave an imprint on the data. Willingness to share information would be affected by the interaction between background levels of threat within the society and one's social position:

H1: Vulnerable residents of Mogadishu will be less likely to answer sensitive survey questions after reminders of anarchic violence compared to secure residents of Mogadishu.

2 Data

Our sample is generated from a face-to-face, population-representative survey of Mogadishu residents conducted in 2012 (AUTHOR CITE). Of this initial sample, 252 (39% of the sample) provided phone numbers for follow-up surveys. These numbers were called via Skype by fluent Somali-language enumerators from the [NORTH AMERICAN CITY] Somali community in the spring of 2013 (Wave 2), in the spring of 2014 (Wave 3), and finally in the fall of 2014 (Wave 4). Treatment conditions were randomly assigned to our sample, which may or may not be representative of Mogadishu residents (see Appendix). Our sample in this study is still attractive because it contains high levels of variation in both acute fear and underlying vulnerability.

In all waves, the survey instrument avoided explicitly political questions due to the charged situation on the ground and concerns that we could put respondents at risk. Instead, the short 24 question survey asked about respondents' current level of services and safety. Questions about a respondent's clan identity were the most sensitive. Clans provide a sense of group identity, organize sub-national distributional politics, and govern a host of traditional intra-ethnic social and political relations and social interactions – from social welfare insurance to marriage markets – and have been focal points for political division and conflict in Somalia. There have been clan-targeting pogroms every time the capital

switched hands, leading to an exodus of many non-Hawiye civilians from the city and a sorting within the city as Abgal and Habr Gidr clans grouped together in homogenous enclaves (where assets like electrical generators could be protected). Measured in terms of overall non-response, the most sensitive questions in the 2014 survey were whether respondents would be willing to share clan name – a question that we did not ask in the first or second wave because it was deemed too sensitive. Variation in willingness to provide an answer to this question motivated this particular research inquiry and became the dependent variable in the experimental design that follows.³

3 Survey Experiment

Our survey experiment randomly assigned respondents to one of two treatment conditions or to a control group. Randomization occurred prior to placing any calls and appears balanced on observables (See Table 1, columns 1 and 2). The sample is not perfectly balanced on variables such as gender and whether a respondent is displaced, so there is some risk that some of our findings are not driven by the experimental conditions but rather by the variations in subgroup characteristics. A larger sample would have been desirable.

Two treatments primed respondents to consider Somalia’s current government consolidation or persisting anarchy – both plausible descriptions of respondents’ political reality in 2014, and both potential sources of acute fear (a point that will be revisited below). We stated: “In this survey, we are interested in how the existence of [a central Somali government / ongoing lawlessness] is affecting citizens’ quality of life.” A control group, consisting of approximately one third of the survey participants, was given no prime at all.

Directly after the experimental treatment, respondents were asked the question we

³ The second most sensitive question, measured by non-response was also clan related – the proxy we used to ask about clan in the first and second wave of the survey, which was whether respondents were in the dominant clan in an area (without naming the clan).

expected to be our most sensitive based on prior survey data and enumerator feedback: whether they were willing to provide their clan name. Item non-response on this question is the dependent variable – a behavioral indicator of subjects' participation reticence. Our favored hypothesis is that this reticence was induced by a shift in perception of threat via the mechanism of risk aversion, though we cannot observe this mechanism directly.

Since we theorized that the risks of revealing sensitive information would not be equally acute for the entire sample, varying on underlying vulnerability, statistical analysis examines interaction effects between anarchy conditions and respondent vulnerability. Our primary measure of vulnerability is whether or not a person reports being displaced in the past year.⁴ Recent violence in the city has created large numbers of internally displaced people living in Mogadishu, as well as people displaced by war and famine from homes in the countryside who migrated to Mogadishu for security. Our question does not distinguish between individuals in IDP camps who had fled the rural famine and former urban residents who were relative losers in the ongoing turf war,. In either case, the question is a valid proxy for relative social vulnerability. This question also had the advantage of being asked at the very beginning of the Wave 3 survey so had full compliance.⁵

Table 2 presents two logistic regressions with refusal to name one's clan as the dependent variable (both including enumerator fixed effects). The interaction between displacement and the anarchy prime is large and statistically significant. These results hold when we control for the government consolidation prime, which itself elicits no significant changes in

⁴ The question wording was "Are you currently displaced?".

⁵ As a robustness check, in the appendix, we also analyzed a model where vulnerability is operationalized as an index of service provision and reported safety. Interaction effects under this latter model are similar to the results presented below using displacement as our measure of vulnerability, although the sample size in the model is smaller due to non-zero levels of non-response on various welfare questions that comprised the index.

behavior. The marginal effect of seeing the anarchy prime is a fourfold increase of a displaced person's likelihood of refusing to answer the question "What is your clan?".

Overall, the survey experiment offers evidence that the threat of anarchy decreases participation in sensitive survey questions for the vulnerable respondents. Concerns about the artificiality of survey primes and vignettes as a technique to simulate real-world violence troubled us, however.⁶ When the same sample was exposed to real anarchy, we had a test.

4 A Natural Experiment

On 24 May 2014, the last day of Wave 3 of our telephone survey, Al Shabaab militants detonated a car bomb outside of the Somali Parliament compound. A coordinated attack on government security forces immediately followed. The gun battle lasted several hours. At least seven militants and ten members of government forces were killed. Four lawmakers were among the many civilians injured. The public and political nature of the attack differentiated it from background levels of violence that Mogadishu residents experience. Word of the large attack spread quickly through television news and social networks. We coincidentally placed the last fifth of our survey calls just hours after the attack (after 5:00pm Somali time). Our Somali American enumerator team in NORTH AMERICAN CITY had heard of the bombing via their social networks by the time they began making survey calls that day.

From the perspective of our survey sample (i.e., the full set of telephone respondents reached in the third wave) the "Parliament Attack" treatment has all of the relevant characteristics of a natural experiment. The order in which numbers were called (or called back) from our list was randomly assigned. The telephone network continued to function throughout the day, and the percentage of respondents agreeing to participate in our survey was actually higher compared to previous days (97% versus 74%). Subsequent investigation of the balance across samples suggests that the treatment group skewed towards the more vul-

⁶ See AUTHOR.

nerable for reasons we cannot explain (Table 1).⁷ Even with this underlying bias in the sample, the interaction of the treatment with the underlying level of respondent vulnerability allows us to make inferences about the effects of real-world security threats on survey behaviors.

Recall that the theoretical expectation is that the attack elevated vulnerable residents' perception of acute threat. The attack was a pre-survey treatment, so measuring a behavioral "fear response" was accomplished in three ways: (1) a count of total questions that a respondent refused to answer; (2) a binary variable for whether the respondent refused to answer any of the three most sensitive questions on the survey (as measured by frequency of refusal – two involve clan and one involves a shift in security); and (3) the same outcome measured in the survey experiment: refusal to share clan name (the question that respondents were most reluctant to answer). Table 3 considers the relationship between vulnerability, operationalized once again by displacement, bomb day, and our three outcome measures. A Poisson model is used for the count variable in Column 1, while a logit model is used for the binary variables in Columns 2-3. The interaction between displacement and bomb day is substantively large and correctly signed in all three models. All three models are under-powered due to the small sample size, with p-values ranging between 0.06 and 0.11. We are 90% confident that the total number of item non-responses increases for Mogadishu's most vulnerable respondents on the day of the Parliament attack – a reminder of real anarchy.

⁷ One speculative rationalization for the fact that vulnerable people were more likely to pick up the phone after the Parliament attack is that a higher threat environment and anxiety have been shown to correlate with greater information-seeking in the political arena (Marcus 2002; Merolla and Zechmeister 2009).

5 Discussion

Vulnerable populations in Mogadishu become less willing to provide sensitive information over the telephone when primed to think about anarchic conditions. This behavioral pattern is consistent with the mechanism of fear, though more research would be necessary to clarify the mechanism. The finding is a reminder that very small changes in the survey environment – subtle shifts in the question wording or changes in a local security context – can alter survey participation. Three provocative speculations are worth considering.

First, there is practical implication for future telephone or internet surveys attempting to keep a representative panel in an active war zone: Very large initial samples should be solicited based on expectations of foreseeable attrition by the most vulnerable. Weighting can later recover representativeness.

Second, our experimental methodology illuminates and quantifies a “winner’s bias” common to quantitative and qualitative studies. Empirical research conducted against a backdrop of violence predictably generate data biased towards the perspectives of the least-vulnerable – often the relative winners. After list-wise deletion of missing data, even high-integrity surveys functionally over-sample the relatively secure. In a worst case scenario, this could leave even high integrity studies vulnerable to the charge of reifying a winner’s history.

Finally, recall that *two* experimental treatments tested against a control in the survey. Only one experiment produced results. Reminders of anarchy clearly changed survey behaviors. Reminders of political consolidation did not. If fear was driving this behavioral change – and this is admittedly a big if – this result has normative implications. Our study provides a qualified answer to the very old question that pits acolytes of Hobbes (1651) against those of Locke (1690): “Which is more frightening for those living in a failed state: an emergent predatory state apparatus, or violent anarchy?” The answer, in Somalia, is violent anarchy.

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Table I Balance Table of Survey Respondents

	Survey Experiment						Natural Experiment			
	Gov't	sd	Control	sd	Anarchy	sd	Control	sd	Bomb	sd
Female	0.65	0.48	0.47	0.50	0.51	0.51	0.56	0.50	0.42	0.50
Age	32.89	9.78	36.86	13.79	34.81	14.09	35.31	13.50	33.31	10.07
Live in Mogadishu	0.97	0.17	0.93	0.25	0.95	0.22	0.97	0.17	0.88	0.33
Displaced	0.61	0.49	0.48	0.51	0.56	0.50	0.49	0.50	0.73	0.45
Family Size	9.89	4.28	10.75	6.38	11.00	5.67	10.52	5.73	11.12	5.05
Heard Gunfire this Week	0.78	0.42	0.69	0.47	0.78	0.42	0.75	0.44	0.76	0.44
Saw Fight this Week	0.14	0.35	0.26	0.44	0.12	0.33	0.17	0.38	0.19	0.40
Welfare Index Spring 2014	2.44	0.95	2.31	1.13	2.28	0.85	2.39	0.97	2.14	1.01
Security Change (-1 to +1)	0.61	0.73	0.65	0.70	0.68	0.69	0.72	0.65	0.40	0.82
Observations	37		45		42		99		26	

Table II

Level of Reticence (Clan Non-Response)
by Anarchy Prime and Displaced

Refusal to State Clan	(1)	(2)
Anarchy Frame	-1.229 (0.852)	-1.398 (0.891)
Displaced	-0.748 (0.545)	-1.078 (0.793)
Displaced X Anarchy	2.438** (1.029)	2.766** (1.177)
Consolidation Frame		-0.444 (0.741)
Displaced X Consolidation		0.715 (1.098)
Enumerator Fixed Effects	Y	Y
Constant	-1.002** (0.478)	-0.836 (0.543)
Observations	120	120

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table III

Level of Reticence, by Bomb Day and Displaced Status

VARIABLES	(1) Total NR	(2) NR on Sensitive Questions	(3) NR Clan ID
Displaced	-0.0231 (0.273)	-0.629 (0.464)	-0.166 (0.484)
Day of Bombing	-1.524 (1.023)	-1.533 (1.143)	-0.905 (1.148)
Displaced X Bomb Day	1.903* (1.063)	1.965 (1.272)	1.301 (1.281)
Enumerator Controls	Y	Y	Y
Constant	-0.487* (0.252)	-0.594 (0.426)	-1.121** (0.460)
Observations	120	120	120

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Calling Mogadishu: Appendix

1 Background

The situation in Somalia has often been used as an object lesson in undergraduate classrooms for the real-world possibility of Hobbesian anarchy. Hundreds of thousands have died since the 1980s. Multiple competing state consolidation projects have unfolded centered on the capital city of Mogadishu. Shifting Somali political coalitions were intermittently assisted by military interventions from a broad coalition of external powers, none of whom wanted to see the Union of Islamic Courts (UIC) ascend to political prominence.¹

A major military turning point was June 2006, when the UIC controlled all of Mogadishu – the first unified actor to do so in 15 years. In response, rapid invasion by the Ethiopian military in December 2006 triggered an implosion in the UIC amidst heavy fighting. Scattered by Ethiopia’s military advance across southern Somalia (with assistance from U.S. airstrikes), UIC forces retreated from the city. With Ethiopian forces providing security, the internationally recognized Transitional Federal Government (TFG) relocated to Mogadishu in January 2007 after spending many years in Baidoa. Security in Mogadishu then deteriorated dramatically. Ethiopian forces faced bombings and ambushes, and eventually withdrew in 2009. By this time, an extreme faction of the UIC calling itself Al Shabaab,

¹ Between 1995 and 2004, all of the peace initiatives in the two Shabelle regions, which surround Mogadishu, were led by Islamic figures attempting to use religion to provide services across clan lines. The authors are grateful to Will Reno for drawing our attention to this empirical regularity.

or “the youth,” had emerged as a powerful military force, controlling more than half of Mogadishu by 2011. The military tide turned on 8 August 2011 when Al Shabaab unexpectedly withdrew from Mogadishu overnight. The TFG suddenly found itself with the opportunity to control a city that had seen only six months of stable control in the past two decades. For the first time in recent history, the United Nations Political Office for Somalia (UNPOS) had a local partner with an opportunity to assert a violence monopoly. But the city remained a patchwork of clan-enclaves, with frequent clashes among clan militias and a zone of open warfare on the city’s outskirts.

2 Initial Sampling

In 2012 – shortly after the *Al Shabaab* insurgent group stopped holding territory, but before the state apparatus had firmly established control over the city – [NORTH AMERICAN UNIVERSITY] conducted the first representative survey of Mogadishu, the capital of Somalia, in 25 years. Unit non-responses may be non-random, which would bias estimates obtained from the survey. Since we have no data on these individuals, we cannot make assumptions about the characteristics of this group or motivations for non-response. Certain portions of the city were depopulated (free-fire zones with no static population) at the time that the first survey was conducted. Procedures are described in AUTHOR. The goal was to generate a defensible estimate of the city’s population on the assumption that the government lacked capacity to generate a credible number on its own. The baseline survey wave identified respondents from 781 households, of which 649 agreed to participate in the study – a response rate of 83% conditional on having been contacted and invited to take part.

This exercise would have been impossible if not for explicit permission from, and co-ordinated cooperation with, the recognized Somali government. This obvious cooperation raised concerns by many study subjects that the exercise was an inaugural census that could function as a *de-facto* land registry and reify contested property claims. The predictable

beneficiaries would be members of a certain clan group: The Hawiye clan family.

Who are these Hawiye? Somalia is unusual among African countries for its unusual level of ethnic, linguistic, and religious homogeneity. Somali society delineates and understands itself through a segmentary lineage system, known more colloquially as a clan structure. Clan lineages, not ethnic cleavages, have provided the focal points for political conflict.² For this reason, a choice was made by the research team very early in the research process to *not* ask respondents to reveal their clan.

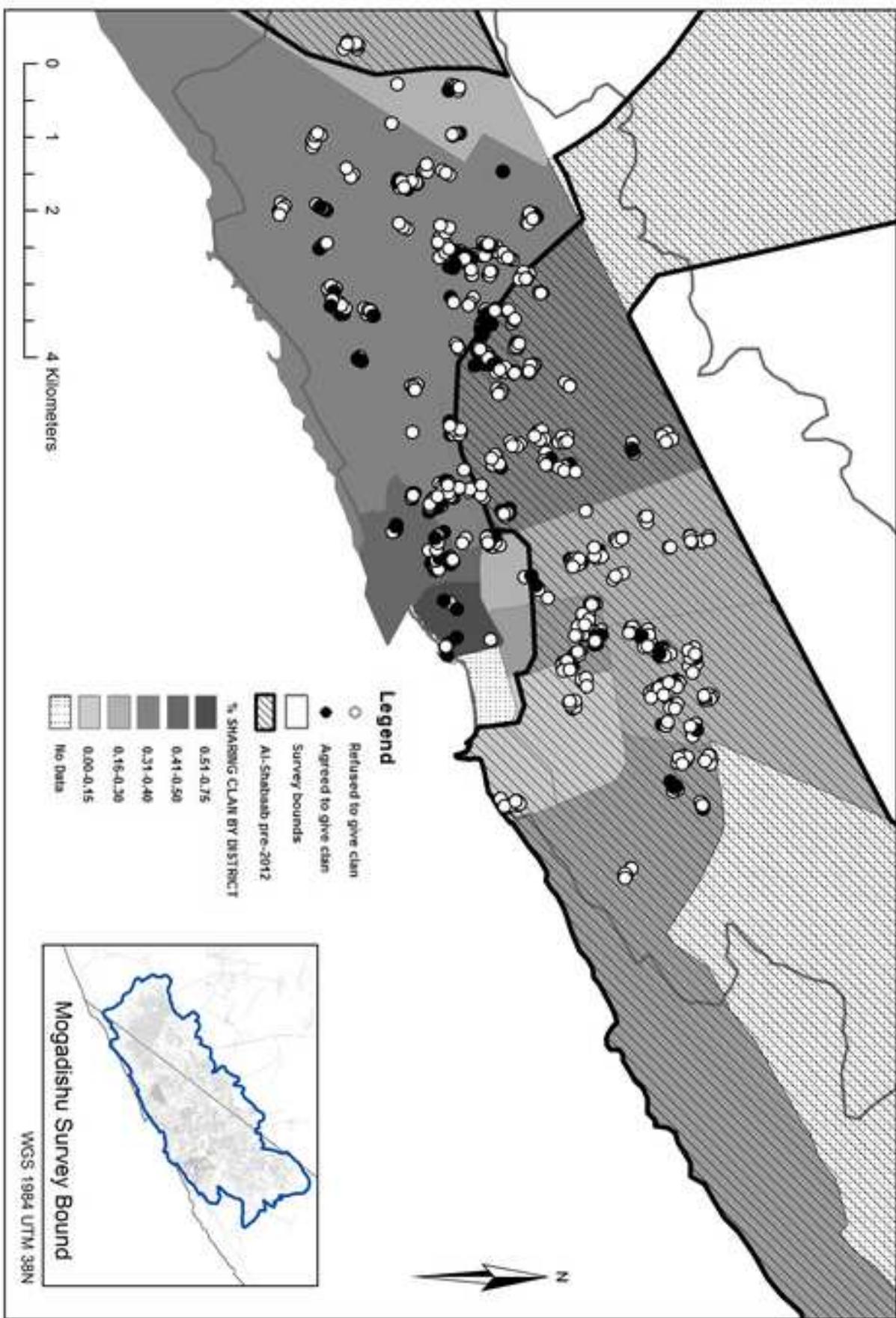
Though the face-to-face wave of the survey did not ask individuals their clan, enumerators did ask the question “Would you be willing to consider telling us your clan in a future survey?”³ Results varied starkly (See Figure 1). In the relatively-secure commercial center of Hamar Weyne, more than 70% of respondents said they would be willing to reveal their clan – more than double the proportion of the next highest district. In most districts once held by insurgents, *none* of those surveyed said they would be willing.

The patterns of non-participation, non-response and refuse-to-answer on the 2012 face-to-face survey track relatively well onto the zone of territorial control by *Al Shabaab*. This is not surprising. Many of these civilians were exposed to government gunfire and shelling in the year prior to the study. Enclaves in this territory would have had no recourse if they were accused of harboring Islamist sympathies as a pretext for driving families from their homes. Our prior was that neither citizens living in territory previously controlled by the Al

² Some blame President Mohamed Siyaad Barre for fostering clan divisions as a divide-and-rule strategy to manage the political consequences of economic contraction and social dislocation resulting from war and famine; others credit his nationalist project for attempting to pave over clans. In any case, the final collapse of Barre’s regime in 1991 triggered a scramble for control of the central government and its capital, Mogadishu.

³ The exact question asked on this survey was: “We are not going to ask you about your clan, but if another survey asked you, would you be comfortable telling them your clan?

Initial Location of Mogadishu Survey Participants, By Willingness to Report Clan



Shabaab insurgency, nor those living in refugee and displacement camps, would be likely to want to participate in a survey that solicited information about their clan identity.

3 Telephone Contact & Panel Attrition

When asked at the end of the survey whether the respondent would be willing to agree to a follow-up survey, 252 (39% of the sample) responded positively and provided their phone numbers.⁴ These numbers were called via Skype by fluent Somali-language enumerators from the [NORTH AMERICAN CITY] community in the spring of 2013 (Wave 2), in the spring of 2014 (Wave 3), and finally in the fall of 2014 (Wave 4). Calls were made in collaboration with the Somali Youth League of [NORTH AMERICAN CITY]. Enumerators were recruited and trained from this group. Each number was tried three times, except for a small portion of numbers in Wave Two, which were attempted only twice.

The goal was to maintain a “virtual panel” to track welfare changes in Mogadishu over two and a half years of violent state consolidation. The effort was a qualified success. From the beginning, it was clear that the individuals who provided phone numbers were systematically different than the rest of the sample: younger, higher welfare, more likely to be displaced, more likely to report living in an area with clean streets and no fighting, more likely to indicate a willingness to provide information on their clan in a future survey, less likely to be from a homogenous enclave, and less likely to be living in an area controlled by a militia captain who was resisting state consolidation (Table I).

Logistical and technological complications introduced biases that probably had the effect of excluding the most vulnerable citizens of Mogadishu from our study. When our first round of Skype calls was placed in Spring of 2013, less than half of the numbers were

⁴ The exact text of the question was: “Are you willing to participate in a follow-up study that would send you questions via SMS? You would receive compensation such as phone credit.”

Table I Probability in Wave 1 of Providing Phone Number

	(1)	(2)	(3)
Provided Cell Number			
Displaced	0.466** (0.19)	0.505*** (0.18)	0.401** (0.18)
Electricity	-0.217 (0.23)		
Street Cleaned	0.661*** (0.19)		
No Gunfire	-0.351* (0.19)		
No Fight	0.796*** (0.24)		
Pay for water	-0.333 (0.24)	-0.534** (0.22)	-0.616*** (0.21)
Will Tell Clan	0.612*** (0.19)	0.598*** (0.19)	0.595*** (0.19)
Former Al Shabaab area	-0.122 (0.19)	-0.273 (0.18)	-0.334* (0.18)
Militia district	-0.646*** (0.19)	-0.530*** (0.18)	-0.436** (0.17)
Homogeneous district	-0.620*** (0.19)	-0.551*** (0.19)	-0.413** (0.17)
Male	0.005 (0.18)	-0.053 (0.18)	-0.068 (0.18)
Age	-0.024*** (0.01)	-0.024*** (0.01)	-0.024*** (0.01)
Vulnerability Wave 1		-0.227** (0.09)	
Ln(Port Proximity)			0.302* (0.16)
Constant	0.360 (0.43)	1.623*** (0.43)	-1.335 (1.33)
Observations	626	626	647
Pseudo R2	0.095	0.071	0.068

answered by an individual willing to complete the survey (121/252). The best predictor of not making contact – either because the telephone number did not work or no one answered after three tries – was the respondent being displaced at the time the phone number was provided (Table II). Summary statistics from the first (face-to-face, Spring 2012) and third wave (via Skype, Spring 2014) of the study can be found in Table III.

Strong anonymity protections also had the effect of limiting our ability to guarantee panel validity. There was a clear trade-off between two goods: assuring respondent anonymity on the one hand, and the researchers' desire to know with certainty that they are keeping a panel of the same respondents over the telephone on the other. Ultimately, based on consultations with Somalis and area experts, we privileged the first set of concerns in the initial study design on the assumption that credible guarantees of respondents' anonymity were a prerequisite to enrolling an unbiased sample of study participants in the first place.

With hindsight, we wondered if we should have provided script that would have allowed respondents to choose an anonymous identifier – like a codeword or a secret number – for validation. The trade-off of using these cloak-and-dagger techniques in a setting like Mogadishu is that many of our enumerators would have come to suspect the motives of the study. In addition, it would not have addressed the ubiquitous fear by Somalis that our phone calls were being monitored by third parties. In any case, because of our anonymity protections we were unable to know with total confidence how many of the respondents in Waves 2-4 were actually the same individuals that were originally surveyed.

In the absence of unique identifiers for panel respondents, we used two criteria to estimate rates of panel attrition: first, whether the respondent answered that s/he was contacted by us in the previous 12 months, and secondly, whether the gender of the voice on the phone matched the gender of the original respondent. We find that a significant portion of our self-identified panel respondents do not report consistent demographic information across

Table II Probability of Callback Success by Wave 1 Characteristics

	(Wave 2)	(Wave 3)	(Wave 4)
Displaced	-0.458*	0.211	0.070
	(0.28)	(0.30)	(0.31)
Electricity	0.093	0.469	0.441
	(0.36)	(0.39)	(0.40)
Street Cleaned	-0.073	-0.794**	0.284
	(0.29)	(0.33)	(0.31)
No Gunfire	-0.582*	-0.251	-0.798**
	(0.30)	(0.33)	(0.34)
No Fight	0.046	0.742*	0.756*
	(0.38)	(0.41)	(0.41)
Pay for water	-0.383	0.014	-0.085
	(0.35)	(0.37)	(0.38)
Will Tell Clan	0.438	0.116	0.609*
	(0.29)	(0.31)	(0.32)
Former Al Shabaab area	0.013	0.197	0.173
	(0.29)	(0.31)	(0.32)
Militia district	0.142	0.314	-0.164
	(0.29)	(0.31)	(0.32)
Homogeneous district	-0.097	-0.060	0.277
	(0.30)	(0.32)	(0.33)
Male	-0.217	-0.112	-0.358
	(0.28)	(0.30)	(0.31)
Age	0.011	-0.001	0.016
	(0.01)	(0.01)	(0.01)
Constant	0.343	0.460	-0.429
	(0.65)	(0.69)	(0.71)
Observations	245	245	245
Pseudo R2	0.037	0.040	0.049

Table III Descriptive Statistics of Respondents in Waves 1 and 3

	(Wave 1 Sample)		(Wave 3 Sample)	
	mean	sd	mean	sd
Female	0.61	0.49	0.53	0.50
Age	32.56	20.12	34.67	12.79
Household Size	7.50	9.43	10.61	5.78
Displaced	0.40	0.49	0.55	0.50
Lived Here Last Year	0.55	0.50	0.74	0.44
Hours Power	8.63	10.32	11.04	11.10
Heard Gunfire	0.49	0.50	0.74	0.44
Saw Fight	0.23	0.42	0.18	0.39
Street Cleaned	0.53	0.50	0.73	0.45
Welfare Index	2.18	0.98	2.32	1.00
Security Has Improved	0.82	0.39	0.76	0.43
Observations	781		125	

waves.⁵ Though 68 respondents reported being the same respondent in Waves 1 and 2 of the survey, at least 20 are actually different individuals, as evidenced by the fact that their gender does not match the gender of the Wave 1 respondent.⁶ Using these parameters, our most conservative estimate would be that of the 647 original participants and the 252 respondents who provided their phone numbers, we have defensible panel data for 30 individuals across all four survey waves (less than one in twenty of the initial sample from the original survey). The majority of the 137 individuals that picked up the phone and opted to participate in the fourth survey wave are obviously not the same people that provided us the initial 252

⁵ Based on discussions with our enumerators, it appears that some participants reported having been surveyed before when another household member was actually the initial respondent. We attribute the unusual increase in the participants reporting that they are the same person between waves three and four to the short time between wave three and four compared to the full year that passed between other waves.

⁶ One interpretation of these trends would be that different respondents were from the same household, even though the survey script asked if the initial respondent was available.

numbers. Once all the phone passes, SIM-card swaps, and other unpredictable factors are taken into account, however, is this really worse than the sample we would have received from random digit dialing? On the one hand, by the end of the panel we were almost certainly not speaking to a representative subsample of the initial respondents. On the other hand, if the "landed" population of 2015 Mogadishu – the relative winners of the gradual war of attrition, the people who are likely to be the selectorate for future Mogadishu politics – are the referent population, perhaps our sample is informative, even if it is not representative.

Measured in terms of overall non-response, the most sensitive questions in Wave Three was whether respondents would be willing to share clan name – the justification for our main study write-up. Of the respondents who *were* willing to provide their clan, however, a clear majority, 58 percent, self-identified as Hawiye or a related sub-clan. It is not accurate to say that all Hawiye are relative "winners," however. The full range of vulnerability scores (0-4) was represented in both the Hawiye and non-Hawiye groups. A t-test comparing average vulnerability between Hawiye and non-Hawiye respondents finds that average vulnerability among non-Hawiye respondents was 0.3 points higher than average vulnerability for Hawiye (significant at 93 percent).

In summary: Willingness to provide a phone number for follow-up survey rounds was non-random. Survey attrition across waves was also non-random. As such, the data in this study is only a convenience sample of Mogadishu residents. For this reason we rely on randomly-assigned treatments for all inferences.

4 English Translations of Relevant Survey Questions

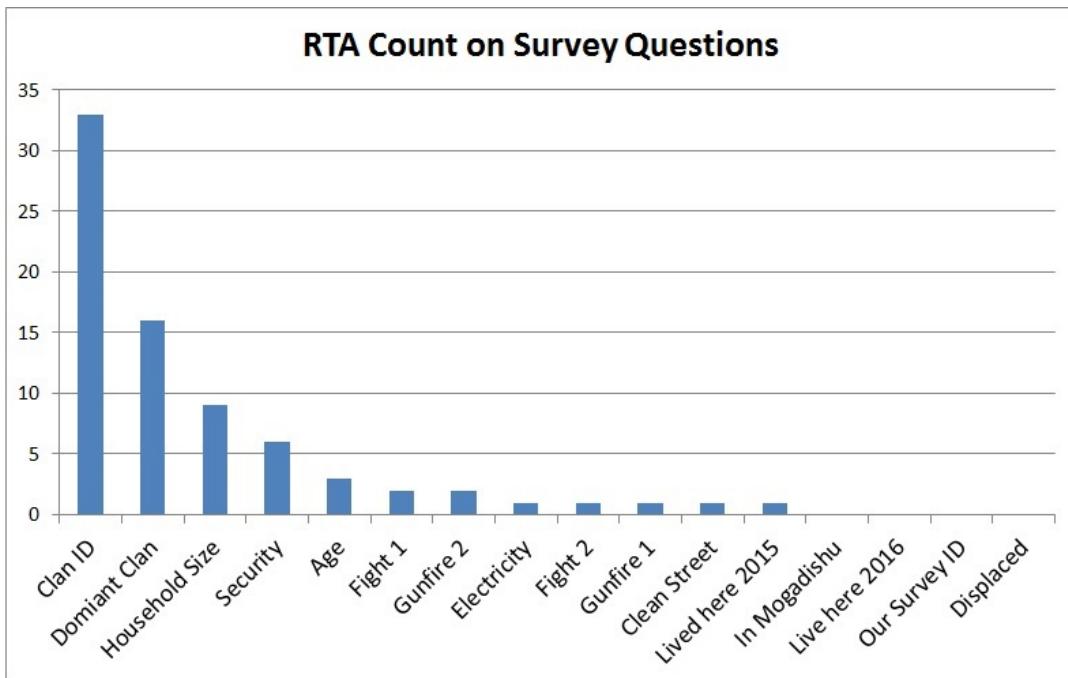
Figure [1] illustrates which survey questions had the highest item non-response rates in the third survey round (the data used in the paper's main analysis). Question language for the most sensitive questions is as follows:

- 1) Are you comfortable telling us your clan? (If YES:) What is your clan?
- 2) Are you from the dominant clan for this area?
- 3) How many people live in this household?
- 4) Think back to this same time last year. How does the security situation now compare to the situation back then?

The survey prime used in the experiment is as follows:

[ENUMERATOR RANDOMLY SELECTS THREE OF THE FOLLOWING STATEMENTS
(a, b, OR c) TO READ TO RESPONDENT:]

- a) In this survey, we are interested in how the existence of a central Somali government is affecting citizens' quality of life.
- b) In this survey, we are interested in how the existence of ongoing lawlessness is affecting citizens' quality of life.
- c. [NO STATEMENT]



5 A Final Note On Representation & The Solicitation of ‘Sensitive Information’

None of the survey waves collected data on political beliefs, respondent identity (except via processes described above), or expectations about the future, focusing instead on the provision of basic services, observed acts of violence, and perceptions of security and vulnerability compared to the previous year. We continued to speculate that we were being over-cautious, however. In the fourth survey wave, we explicitly tested the hypothesis that respondents would refuse to participate further in our study if we asked for progressively more sensitive identifying information – such as approximate home location and even respondent name.

As our third survey question in Wave 4, enumerators asked respondents where in Mogadishu they lived, requesting landmarks and street names to make the information as specific as possible. The enumerators then used Google maps (in real time) to find approximate geotagged coordinates for the home. To our surprise, less than 12 percent of respondents

refused to provide location information. None of the respondents dropped out of the survey after being asked to provide this information. Overall, the 126 respondents who opted to participate in Wave 4 on average refused to answer less than one question each (0.6).

At the end of the survey, we further tested whether asking for identifying information would lead to high item non-response rate. We asked respondents, "Would you be willing to give us your name?", and if they said yes, we subsequently asked for their name. We did not actually record the names, only whether a respondent was willing to provide their full name. Fully 80% of respondents were willing to provide a full name (first and last). While this response rate was much higher than expected, it also illustrates that at least a fifth of the sample would not have participated if forced to provide their names as a condition of participation (and this is almost certainly an under-estimate, since it does not include all of the people who did not want to participate in the survey in the first place).

What remains unclear to our team is whether this unexpectedly high willingness to share identifying information only existed because of rapport and respondent trust that developed organically (e.g., due to repeated phone contact with the same people), or if it was survey attrition (e.g., that we gradually eliminated everyone except for "talkers" from the sample). It is certainly the case that rapport developed with certain respondents over time.

Sometimes the answers that we received were jarringly specific. On December 13, 2014, one of our respondents, while answering the question "do you hear gunfire on your street," volunteered that earlier in the week there had been a person murdered next door to her home. She asked the enumerator to repeat what she had said back to her so that she knew that he had heard her correctly and was listening with empathy. He did, and she proceeded to complete the questionnaire. We share this anecdote simply to draw attention to the fact that the willingness to provide sensitive information was consistently high – arguably higher than we would expect in places with better economies and more developed infrastructure.

In hindsight random digit dialing could have reached a larger study population at low additional cost. At least some of the people that picked up the phone probably would have answered our questions. The challenge of representation – presenting data from exotic, but highly vulnerable, samples – is a quickly evolving ethical frontier for students of political behavior. We hope our paper contributes to the evolution of best-practices.

6 Permissions & Acknowledgements

All data analyzed in this project were collected according to processes approved by the Human Research Protections Program at the NORTH AMERICAN UNIVERSITY (Project # 111743 and #131065). The initial 2012 face-to-face survey was conducted cooperatively with [NAME] and the assistance of enumerators recruited from SUHA Mogadishu. Funding was provided by the National Science Foundation [SES-1216070] and the NORTH AMERICAN UNIVERSITY [GRANTS LISTED]. [NAME] at Microsoft facilitated permissions for the Skype calls to Mogadishu in 2013. The names of the Somali-language survey enumerators that operated the phone bank are [OMITTED]. Thanks to [OMITTED]