

Working Paper No. 180

Police-citizen interaction in Africa

An exploration of factors that influence victims' reporting of crimes

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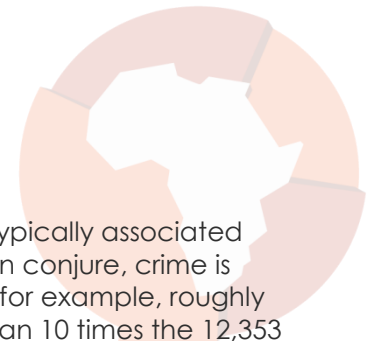
Davin O'Regan is a PhD student at the University of Maryland School of Public Policy.
Email: doregan@umd.edu

Abstract

While personal insecurity in Africa is typically associated with civil wars, crime is actually a far more common threat to the continent's citizens. Rates of homicide, sexual assault, and property crime in Africa are often far higher than global averages. Despite such threats, many Africans do not report crimes to the police. According to surveys conducted in 32 African countries in 2011, 2012, and 2013, 56% of respondents who had experienced a crime within the previous 12 months did not report it to the police. Common explanations for such inhibited reporting of crimes include a general lack of trust in the police, the politicization of police forces, citizens' inability to easily access the police, or low community cohesion where victims reside. Using multilevel logistic regression techniques, this study tests these explanations. Findings suggest that neither trust in police nor politicization of police forces displays significant influence on citizens' likelihood of reporting crimes. Likewise, community cohesion bears no consistent relationship with higher rates of reporting, while access to police does appear positively associated with the likelihood of reporting victimizations. Contrary to findings in many developed countries, women in Africa appear to be less likely than men to report crimes to the police.

Acknowledgements

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Introduction: Crime and policing in Africa

Personal security is a major challenge across Africa. While insecurity is typically associated with the civil wars and intrastate conflicts that references to Africa often conjure, crime is actually a far more common threat to the continent's citizens. In 2010, for example, roughly 168,000 homicides were estimated to have occurred in Africa, more than 10 times the 12,353 Africans who died in battles or episodes of civil unrest as reported by the Armed Conflict and Location Event Data project (Raleigh et al., 2010). In fact, more than a third of all homicides worldwide in 2010 occurred in Africa, according to measurements by the UN Office on Drugs and Crime (UNODC, 2011). Other violent crimes are also highly prevalent in Africa. Past surveys indicate that rates of assault, sexual assault, and property crime are higher in Africa than most other regions (UNODC, 2005).

Such high rates of crime affect not only personal security but development prospects on the continent as well. The poor, who hold meager productive assets, are deeply impacted by theft and property crime. Crime also generates huge barriers to market entry. Approximately 30% of African businesses frequently rate security and crime as top considerations and costs in their day-to-day operations, according to surveys (World Bank, 2011). In Tanzania, a comparatively stable African country with a history of minimal conflict or political crises, previous victimization surveys in several major cities indicate that citizens alter their behavior due to fear of crime, including with respect to walking at night, keeping livestock, or starting a business (Stavrou & O'Riordan, 2004).

A key step in managing and controlling crime involves the police. Of course, crime in general may be prevented through alternative interventions. Better employment opportunities, higher household incomes, and stronger educational systems, among other social and economic policies, might reduce the tendency of individuals to resort to or commit crimes. But the police remain a critical component of crime control, and citizens act as "gatekeepers" to crime control when they decide to report an incident to the police (Tyler, 2004; Berg, Slocum, & Loeber, 2013). Indeed, "the decision to report crimes may be the most influential one made in the criminal justice system" (Skogan, 1984, p. 118). Reporting a crime does not ensure that it will be successfully resolved, but crime control often starts with reporting.

Do citizens across Africa report crimes to the police? Why or why not? This study analyzes various individual- and country-level factors that may explain why some citizens, but not others, report victimizations to formal law enforcement. It examines commonly held notions about police-citizen interactions, including that the politicization of police forces and general mistrust of the police inhibit citizens' willingness to interact with the police and that more active and cohesive communities may experience reporting of incidents to the police at a higher rate.

A better understanding of the decision to report crimes may also reveal important dynamics related to challenges of state fragility and weak state-society relations in Africa. Whether it be crime, terrorism, or budding insurgencies, most threats to state stability in Africa are internal in origin, not external, and require cooperation and trust between formal security institutions and the broader populace. However, in many African countries there is a prevailing notion that relations between the police and the population are standoffish, even fraught. Understanding which factors may influence the reporting of crimes to the police, then, may reveal insights into how citizens view and interact with a state's security apparatus, especially those security officers they are most frequently and likely to interact with – the police.

The study will begin with a review of existing theoretical and empirical analyses of reporting of crimes to the police in the United States, Europe, and elsewhere as well as commentary and qualitative work conducted on policing in Africa. Drawing from these literatures, several hypotheses will be presented for testing with a multilevel logistical regression model. The



model is populated by Afrobarometer survey data from 32 African countries. The study closes with an analysis of the model results and their policy implications.

Previous research on reporting of crimes

Several analyses of reporting of crime were initiated in the 1970s and 1980s using victimization surveys conducted at the national and municipal levels in North America, Europe, and Australia, as well as several smaller studies in Mexico and Colombia. Surprisingly, rates of reporting were rarely very high. “In every jurisdiction there is a great deal of unreported crime – even in the most ‘civil’ places, where cooperation with the police was presumed to be high – and everywhere the decision to report seems to be dominated by a rational calculus regarding the costs and benefits of such action” (Skogan, 1984, p. 114). Across the United States and European countries, rates of burglaries that were reported to police in the 1970s and 1980s varied between 45% and 67%, with the U.S. figure at about 50% (Skogan 1984). In other words, at least one-third of incidents perceived as crimes by victims were not reported to the police. Reporting does not appear to have changed dramatically since. In 2014, only 46% of assaults and 60% of burglaries in the United States were reported to the police (Truman & Langton, 2015).

Past analysis of the determinants of reporting focused on incident, individual, and environmental factors (Table 1). Specifically, what type of crime was experienced, the demographic and socioeconomic profile of the victims, a victim’s perception of the police, and the environmental context of the incident were examined for any effect on reporting. Factors that were found to consistently raise rates of reporting of crime included the seriousness of the crime, the prospect of restorative services or insurance coverage, a sense of obligation among victims to prevent or deter future crime, and whether the victim believed there was sufficient actionable information or evidence for the police to pursue investigation. Surprisingly, a victim’s attitudes toward the police did not consistently affect reporting, even in contexts featuring hostile police-citizen relationships, such as cities where riots had recently occurred. Nor did demographic factors, such as race and income, result in significant differences in reporting, though these factors were associated with different rates and seriousness of crime, which in turn affected reporting. Women were more likely to report crimes than men. Reporting rates by crime type are similar in urban, suburban, and rural areas, according to U.S. surveys (Skogan, 1984). Overall, the seriousness and cost of a crime bore the largest association with reporting, while many victim-specific factors such as race and income displayed no clear relationship.

Table 1: Factors that affect rates of crime reporting

Increases reporting	Decreases reporting	No or unclear effect
Seriousness of crime	Close relationship between victim and perpetrator	Race
Restorative services/ insurance claims	Victim and perpetrator share membership in close community	Income
Victim’s criminal history	Evidence/info about crime unavailable: “Police can’t do anything.”	Community type, i.e. urban, suburban, rural
Gender: Women report more		Attitudes toward police
Sense of obligation to deter/ prevent future crimes in community		

Source: Adapted from Skogan (1984) and based on studies from the United States, the United Kingdom, Canada, Germany, Australia, Israel, and the Netherlands



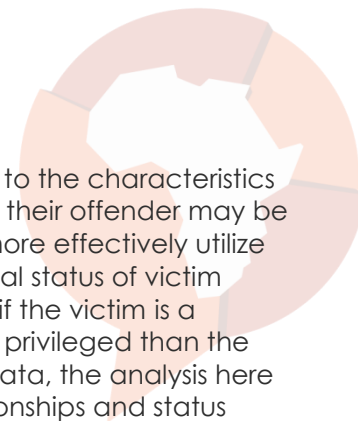
More recent surveys and analytic work have explored reporting in developing-country contexts and the influence of community- and neighborhood-level factors on individual reporting. In analyzing their random survey of 532 households in Belize City in 1990, Bennett and Wiegand (1994) hypothesized that income, gender, education, and other indicators of social status would play a larger role in reporting in Belize than in developed countries. In Belize and many developing countries, Bennett and Wiegand theorized, policing, and governance in general, tend to be “particularistic” and based on status and access to elite circles, whereas in developed countries policing is more universalistic and focused on responding to events regardless of the status of the victims involved. In Belize, Bennett and Wiegand believed, such a “particularistic” form of policing is widely perceived and disinclines victims of crime who are not part of the favored political or economic classes from reporting incidents. They further assumed that particularism would extend to the neighborhood level, with poorer, more diverse areas reporting less frequently due to a community-level sense that police services are not equally accessible or provided.

Bivariate and multivariate analyses of Bennett and Wiegand's survey results did not support their theory of particularism. Indeed, their findings largely align with the earlier work on reporting conducted in developed countries.¹ The authors find that income is positively related to reporting but that no other individual- or neighborhood-level factors display a statistically significant relationship with reporting. A history of victimization and the seriousness of the type of crime or incident were most strongly associated with reporting, just as has been repeatedly found in developed countries (Skogan, 1984).

Focusing on the role of neighborhood-level factors, Goudriaan, Wittebrood, and Nieuwbeerta (2005) drew on survey data from across the Netherlands and used hierarchical regression to analyze the influence of social cohesion, socioeconomic disadvantage, and confidence in the police at the neighborhood level on reporting at the individual level. Due to higher involvement in illicit activities and higher tolerance of deviance, disadvantaged neighborhoods are believed to have weaker access and lower inclination to report to law enforcement. Low community confidence in the police should reduce the expectation among all community members that reporting is worthwhile. Lastly, fragmented neighborhoods are less able to organize and access government services, including law enforcement, and this should reduce individuals' tendency to report crimes. To measure neighborhood-level factors, the authors aggregated individual-level survey results to the neighborhood level and created scores on cohesion and confidence in the police. Disadvantage was scored based on rates of welfare use, unemployment, and other socioeconomic indicators.

Consistent with previous research, they find that the type and severity of the crime is significantly associated with reporting. Socioeconomic disadvantage as measured by income, welfare recipients, single-parent households, and unemployment aggregated to the neighborhood level is also negatively related with reporting of crime, though the relationship is nonlinear and its marginal effect is strongest in the most disadvantaged neighborhoods. Meanwhile, social cohesion is positively and consistently associated with reporting and even appears to moderate the negative influence of highly socioeconomically disadvantaged neighborhood. Reinforcing earlier findings from Skogan (1984), attitudes toward the police at the neighborhood level demonstrate no relationship with reporting. For future research, Goudriaan et al. recommended that “it would be useful to include victim-level indicators for the social cohesion and confidence in police effectiveness” (p. 738), a step that is included in the analysis in this paper.

¹ However, it is not clear that the variables they use in their statistical analysis are faithful proxies for the determinants of reporting as detailed in their theoretical discussion. For instance, Bennett and Wiegand make repeated reference to police deployment patterns and lack of access to telephones as determinants of reporting, but neither of these factors is reflected in their explanatory variables. To be fair, these are not easily accessible data.



Other factors that are believed to impact the reporting of crime relate to the characteristics of the offender and the victim-offender relationship. Victims who know their offender may be less inclined to report them to formal authorities or feel that they can more effectively utilize informal methods of resolving the victimization (Skogan, 1984). The social status of victim and/or offender may also influence the decision to report, particularly if the victim is a member of a racial, ethnic, or other social group that is relatively more privileged than the offender (Xie & Lauritsen, 2012). Overall, given limitations in available data, the analysis here does not explore how offender characteristics or victim-offender relationships and status affect reporting.

Reporting crimes in Africa: Four hypotheses

Similar to Bennett and Wiegand's theorizing on policing and perceptions of policing in Belize, qualitative analysis and commentary on policing in Africa tend to differentiate it from policing in developed countries. A history of colonialism, comparatively weaker political institutions, and less-developed socioeconomic conditions are believed to generate distinct views of law enforcement and policing practices across Africa. These factors are believed to have a strong effect on whether citizens in African countries report criminal victimizations to the police.

African police as an institution are regularly described as highly politicized. They are often referred to as the "president's men" (Hills, 2007; Alemika, 2009) coopted by incumbent national leaders to maintain regime security and manage political opposition. Heads of state frequently "value the police as a tool for enforcing political decisions, maintaining order, regulating activities and regime representation" (Hills, 2007, p. 407). As a result, African police forces are "often more concerned with regime maintenance than crime control" (Owen & Cooper-Knock, 2014, p. 358). Some police forces in Africa have displayed more independence and respect for the rule of law, but "presidential control [of the police] is complete – and usually constitutionally legitimate – with the critical variables [in police performance] being a president's personality, agenda and ethnicity, rather than the nature of the regime itself" (Hills, 2007, p. 420). In other words, more democratic African countries do not necessarily have more depoliticized, professional police forces.

By extension, the politicization of the police may affect a citizen's decision to report a crime. The perceived performance and responsiveness of the police may be a function of a victim's support or views of national political leaders. Citizens may be more inclined to report a crime to the police if they trust the president or have political allegiances to him/her. In other words, the police may be "the president's men," but if a victim is a political supporter of the president, then he/she may feel the police are "their men," too.

Hypothesis 1: Greater confidence and trust in the president/prime Minister will result in a higher probability of reporting crimes to the police.

Problems of police abuse, corruption, and ineffectiveness are often described as particularly acute in Africa, potentially rendering attitudes toward police forces a more significant predictor of the reporting of crimes. "Nigerians and South Africans often assume that the criminal justice system will not function in the way they feel it should. Why, then, do people still engage with the Police?" (Owen & Cooper-Knock, 2014, p. 359). Other qualitative comparative assessments of police reform efforts in Kenya, South Africa, Nigeria, and Uganda consistently identify citizens' low levels of trust in the police as critical in a victim's decision to respond to crimes and disputes through other means (Van der Spuy & Röntsch, 2008; Davis, Henderson, & Merrick, 2003). In many countries, low trust in the police is also common and persistent. In Afrobarometer surveys from 1999 through the most recent partially completed round in 2017, at least 20% of respondents, and as many as 26%, have said they do not trust the police at all. In some countries, such as Ghana, Nigeria, and Madagascar, one-third to one-half of all respondents reported no trust in the police in some survey years. Whereas attitudes toward the police tend not to independently affect the



reporting of crimes in many developed countries, perceptions of the police in Africa may be uniquely weak and therefore exert a much stronger and more consistent influence on decisions to report.

Hypothesis 2: Greater confidence and trust in the police will result in a higher probability of reporting crimes to the police.

A citizen's decision to report may be based not just on politics and perceptions of state institutions, but on practical considerations as well. Due to a lack of economic and infrastructural development on the continent, police tend to be under-resourced, poorly deployed, and difficult to reach for many Africans (Owen & Cooper-Knock, 2014; Bennett & Wiegand, 1994). A basic issue of access, then, may be a significant factor in the decision to report. For instance, many citizens may live in localities with no police station or sustained police presence, making it impractical if not impossible to report victimizations and crimes. However, changing technology may also affect accessibility of the police. The rapid expansion of mobile telephony in Africa over the last decade should mitigate the continued effects of underdevelopment in Africa on reporting. In 2002, only one in 10 citizens in Tanzania, Uganda, Kenya, and Ghana owned a mobile phone, whereas roughly seven in 10 owned a phone in these same countries in 2014 (Poushter & Oates, 2015). Many Africans now have the ability to remotely and quickly reach emergency services, including the police. Presumably, this should increase Africans' ability to contact the police and the probability that a crime is reported to law enforcement.

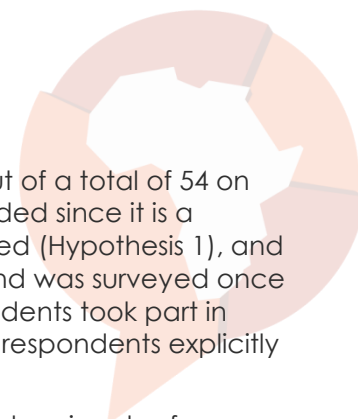
Hypothesis 3: Greater access to the police will result in a higher probability of reporting crimes to the police.

As in previous studies of reporting in the Netherlands by Goudriaan et al. (2006), Africans' tendency to report crimes may be shaped by the cohesiveness of the communities where they live. Community cohesion and engagement might influence the decision to report a crime in multiple ways. First, greater community activism through formal and informal meetings may increase discussions of public safety issues as well as interactions with relevant officials, such as police officers. Greater community engagement may also reduce the degrees of separation between a prospective victim's social network and that of a law enforcement officer. Close ties to other community members may serve as a support network and reduce any apprehension or concerns a victim may have about interacting with the criminal justice process. Lastly, greater community engagement increases a sense of obligation to report crimes to prevent future victimizations within the community. In Africa, then, communities that are more cohesive may more regularly report crimes to the authorities. These effects may be due to general community-level cohesion, independent of a victim's direct engagement in such community activities.

Hypothesis 4. Greater community cohesion will result in a higher probability of reporting crimes to the police.

Data and methods

In Afrobarometer's fifth round of national surveys (2011/2013), respondents were asked whether and how many times something was stolen from their own or a family member's home during the previous 12 months. They were then asked whether and how many times they or a family member were attacked during the previous 12 months. If the respondent answered affirmatively to either of these questions, they were then asked whether any such incidents were reported to the police. The "yes/no" answer to this question is the binary dependent variable in this analysis.



The Round 5 Afrobarometer surveys were conducted in 34 countries out of a total of 54 on the continent. Only 32 countries² are analyzed here. Swaziland is excluded since it is a monarchy and no questions regarding views of the president were asked (Hypothesis 1), and Tanzania is excluded due to incomplete data. Each country in the round was surveyed once in 2011, 2012, or 2013. Roughly 1,200 or 2,400 randomly selected respondents took part in each country, for a total of nearly 52,000 participants. Of these, 13,638 respondents explicitly answered whether they did or did not report a crime to the police.

Six individual-level variables are used as proxies for the hypothesized determinants of reporting as previously discussed: a respondent's trust in the president/prime minister, trust in the police, membership in a voluntary association, frequency of attendance in community meetings, and access to a mobile phone as well as the presence of a police station in their primary sampling unit (PSU). Six additional individual-level variables were included to control for factors analyzed in previous studies of reporting: respondents' age, gender, living conditions, and environmental context (urban or rural), as well as incident severity (whether the victimization involved a physical attack) and respondents' preferred reporting institution, or choice of whom they would turn to first if they were victims of a crime. (On this question, respondents were offered 23 possible response options, including the police, a private security service, traditional leaders, and a local gang. This variable helps account for whether the availability of informal or private security structures may affect the reporting of a crime to the police, whether immediately after victimization or sometime later.)

Most variables are self-reported, save for the presence of a police station in a PSU and whether a respondent lives in an urban or rural area, which are determined by the enumerator. The frequency counts of interview responses for all independent variables of interest (i.e. those used to test the hypotheses) used in the model can be found in the appendix. Several variables feature simple "yes/no" dichotomous answers. Others are four- or five-point ordered scales on which respondents express their views on a subject from "not at all/never" to "a lot/often" with an option for "don't know/haven't heard enough." "Don't know" answers, refusals, and missing observations were excluded from analysis. This resulted in the inclusion of 12,365 observations of the 13,638 reported victimizations, a loss of 10% of the data. Of this 10% of excluded observations, respondents who opted not to declare their level of trust in the president/prime minister accounted for more than one-third. The potential for bias due to the exclusion of these observations seems minimal, however, since the rate of reporting victimizations among those who "don't know" their level of trust in the president/prime minister is 40%, or fairly similar to the overall rate in the data set. As will be detailed later, other associated bias concerns may also be minimal.

Across all self-reported victims, the rate of reporting is 44% (see Figure 1). Notably, this reporting rate is not much different from the 46% for violent crime and 60% for burglary observed in the United States (Truman & Langton, 2015). However, reporting rates range widely across countries, from more than 70% in Algeria to less than 20% in Togo. Variation in individual-level factors, such as perceptions of the president and police or community engagement and access to the police, may account for such substantial cross-national differences, but as our modeling results show, this does not appear to be the case here.

² Algeria 2013, Benin 2012, Botswana 2012, Burkina Faso 2012, Burundi 2012, Cameroon 2013, Cape Verde 2011, Côte d'Ivoire 2013, Egypt 2013, Ghana 2012, Guinea 2013, Kenya 2011, Lesotho 2012, Liberia 2012, Madagascar 2013, Malawi 2012, Mali 2012, Mauritius 2012, Morocco 2013, Mozambique 2012, Namibia 2012, Niger 2013, Nigeria 2012, Senegal 2013, Sierra Leone 2012, South Africa 2011, Sudan 2013, Togo 2012, Tunisia 2013, Uganda 2012, Zambia 2012, Zimbabwe 2012

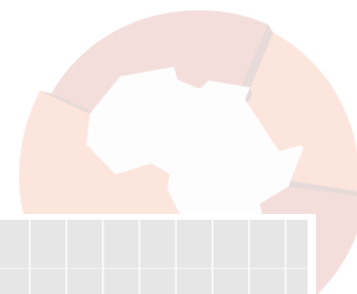
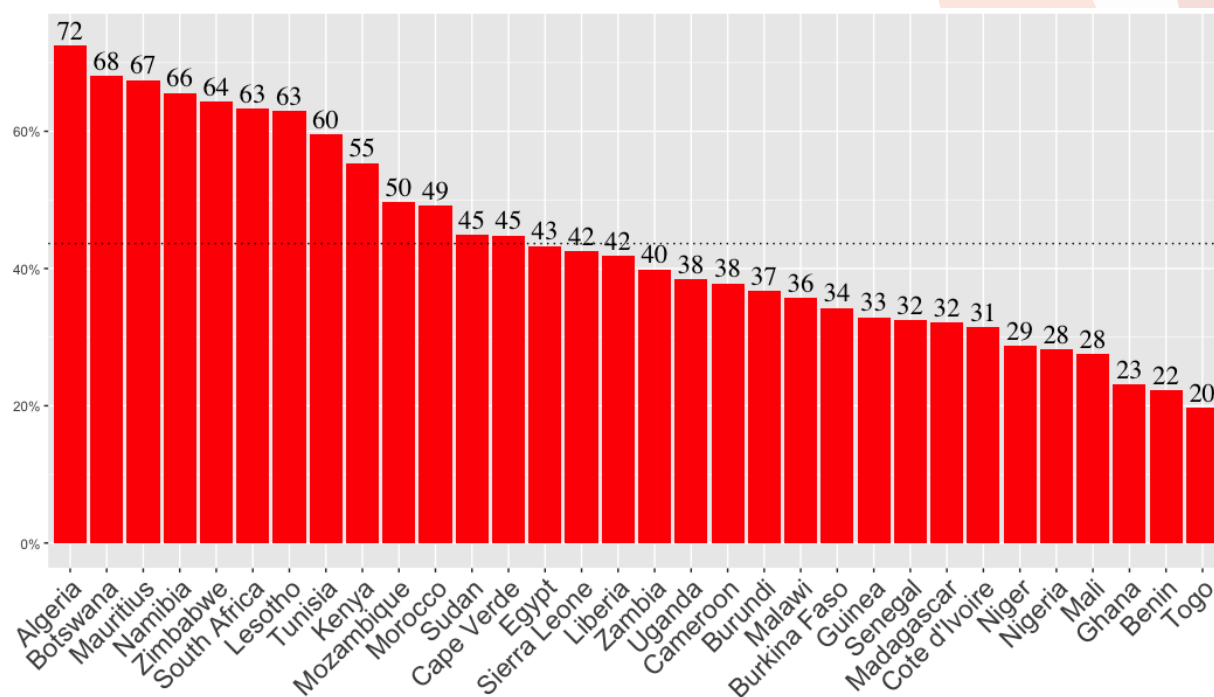


Figure 1: Rate of crimes reported to the police, by country



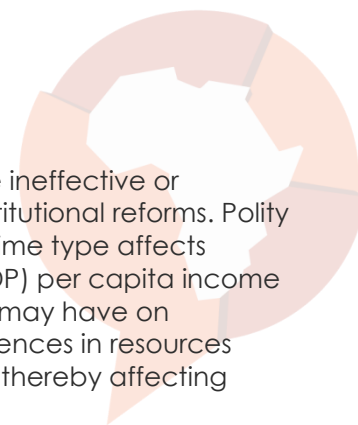
Source: Data from Afrobarometer; chart by author. Dotted line represents reporting rate across all respondents regardless of country.

Several Afrobarometer variables were recoded for clarity and ease of use. The “urban/rural” binary variable was not consistently coded across all countries. Specifically, in Botswana and Malawi, the survey featured an additional “semi-urban” category that did not appear in any of the other countries. “Semi-urban” observations accounted for 23% of observations in these two countries. In order to retain these countries for analysis, the “semi-urban” observations were randomly redistributed to the “urban” and “rural” categories. Respondents’ preferred reporting institutions (whom they would first turn to in the event of a victimization) were collapsed into a dichotomous variable distinguishing between those who selected the police and those who selected any of the other 22 options. Finally, the age variable was grouped into decade bins to improve statistical modeling performance and avoid technical difficulties.

Four country-level variables were included. To capture whether variation in reporting of crimes is due to prevailing levels of serious crime in a country, the national homicide rate as reported by the UN Office on Drugs and Crimes was obtained for each country. Unfortunately, annual homicide data could not be obtained for the same year in which the Afrobarometer surveys were conducted. So annual rates from earlier years were used: the 2008 rate for 28 of the 32 countries, and rates from 2010 for South Africa, Mauritius, Morocco, and Lesotho.

Ethnicity is often attributed powerful influence on political, social, and economic behavior in Africa, including in the literature on policing. Political Relevance of Ethnic Groups (PREG) scores were included in the analysis to determine whether the diversity of politically active ethnic groups in a country somehow affects whether citizens report crimes to the police (Posner, 2004).³ Democratic countries are also often described as more inclusive and having

³ PREG scores were unavailable for Algeria, Cape Verde, Egypt, Morocco, and Tunisia. Ethnolinguistic fractionalization (ELF) scores were used as best available substitutes.



higher levels of accountability, since citizens are better able to remove ineffective or unresponsive leaders or elevate those who can advance preferred institutional reforms. Polity IV country scores were included in the analysis to capture whether regime type affects reporting behavior. Lastly, log transformed gross domestic product (GDP) per capita income was included to control for any influence that relative national wealth may have on individuals' reporting behavior. Such wealth may be reflective of differences in resources available to and capacities of law enforcement or the judicial system, thereby affecting reporting decisions.

Given the grouped structure of the data, with individuals nested within enumerator areas and countries, a multilevel logistic regression technique was used for analysis. A multilevel model – also referred to as a hierarchical model – offers a few advantages over other approaches. First, it permits the simultaneous use of country-level and individual-level data. Second, the multilevel procedure is necessary to test Hypothesis 4, that greater cohesion within communities will improve individuals' reporting of crimes. While the Afrobarometer survey does include questions that capture the degree to which individuals engage in their communities (i.e. frequency of attendance at community meetings and membership in voluntary associations), it does not contain an aggregate measure for community cohesion where a respondent lives. To build such a measure, a community engagement score was calculated by adding the values of individuals' self-reported community meeting attendance and membership in voluntary associations and then averaging the scores within survey enumerator areas. Thus, the community cohesion score was calculated from the responses of all individuals surveyed within an enumerator area, not just those who reported a victimization. Essentially, survey enumerator areas were treated as “communities,” and the community engagement score was tallied from responses of the respondents randomly selected for the survey in each enumerator area.

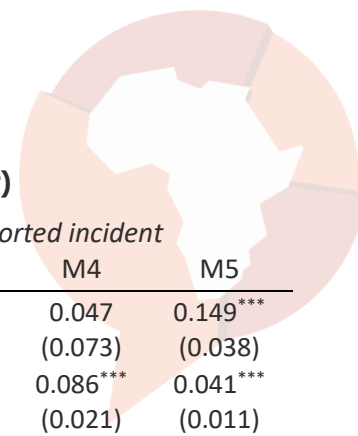
Such community cohesion scores could not be calculated for all enumerator areas, unfortunately. The Afrobarometer data lack enumerator area IDs for some respondents, and therefore community engagement scores could be calculated for only a subset of respondents. Moreover, at most eight respondents were surveyed in each enumerator area, which is a small number from which to calculate a mean community cohesion score. This procedure, however, was determined to afford the best opportunity to examine the relationship between community cohesion and individual reporting rates. The modeling output does not immediately suggest that the results are significantly affected by the loss of data.

To ease interpretation of the model output, all non-dichotomous explanatory variables were treated as continuous. This required the assumption that the intervals of all ordinal variables are fixed and equal.⁴ No claims about causation are intended or should be inferred from the modeling results, which merely demonstrate potential correlates and linkages between self-reported perceptions and behavior with the reporting of crimes to the police.

Results and analysis

The modeling output yields mixed and surprising results. Strong support emerges for just one hypothesis, that access to the police consistently influences reporting, while null results undermine the remaining three. Generally speaking, the multilevel technique indicates that country-level factors account for only a small level of influence in individual-level reporting of crimes and victimizations. Contrary to findings from previous studies in developed countries, several control variables are associated with the reporting of crime. Table 2 contains all modeling output and various specifications.

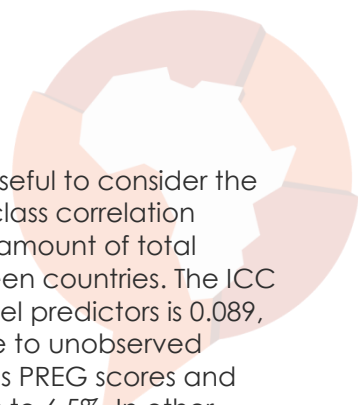
⁴ Modeling was conducted using the lme4 package and glmer command in R.

**Table 2: Factors that affect the reporting of crimes (model output)**

		<i>Dependent variable: Reported incident</i>					
		M1	M2	M3 ⁱ	M4	M5	
Level 1 (individual-level vars)	Urban	-0.003 (0.047)	-0.008 (0.047)	0.005 (0.048)	0.047 (0.073)	0.149*** (0.038)	
	Age (deciles)	0.083*** (0.014)	0.083*** (0.014)	0.083*** (0.014)	0.086*** (0.021)	0.041*** (0.011)	
	Female	-0.149*** (0.040)	-0.149*** (0.040)	-0.144*** (0.040)	-0.155** (0.061)	-0.081** (0.033)	
	Preferred reporting institution	-0.847*** (0.042)	-0.843*** (0.042)	-0.842*** (0.043)	-0.886*** (0.067)	-0.527*** (0.036)	
	Perceived relative living condition	0.023 (0.017)	0.023 (0.017)	0.027 (0.018)	0.006 (0.026)	-0.037*** (0.014)	
	Victim of attack	0.533*** (0.044)	0.532*** (0.044)	0.531*** (0.044)	0.591*** (0.066)	2.413*** (0.041)	
	Member association, org.	0.101*** (0.022)	0.101*** (0.022)	0.103*** (0.022)	0.111*** (0.035)	0.133*** (0.018)	
	Attendance at community meetings	0.068*** (0.017)	0.071*** (0.017)	0.072*** (0.017)	0.084*** (0.029)	0.091*** (0.014)	
	Trust in president/PM	-0.002 (0.020)	-0.001 (0.020)	0.011 (0.029)	-0.014 (0.030)	-0.019 (0.016)	
	Trust in police	-0.033 (0.020)	-0.033* (0.020)	-0.028 (0.025)	0.018 (0.030)	-0.101*** (0.017)	
	Police station in PSU	0.142*** (0.044)	0.147*** (0.044)	0.136** (0.064)	0.109 (0.069)	0.132*** (0.036)	
	Mobile phone accessibility	0.123*** (0.029)	0.120*** (0.029)	0.112*** (0.029)	0.146*** (0.046)	0.161*** (0.025)	
	Level 2 (state-level vars)	PREG		-0.251 (0.392)	-0.195 (0.387)	-0.357 (0.524)	0.087 (0.377)
		GDP per capita (log)		0.305*** (0.089)	0.297*** (0.091)	0.189 (0.125)	0.010 (0.085)
		Polity		0.014 (0.020)	0.013 (0.019)	0.037 (0.036)	0.025 (0.019)
Homicide rate (national)			-0.001 (0.007)	-0.003 (0.007)	-0.005 (0.010)	0.007 (0.007)	
PSU/Community cohesion					-0.065 (0.041)		
Constant	-0.717*** (0.146)	-2.821*** (0.677)	-2.796*** (0.692)	-1.942** (0.931)	-3.044*** (0.646)		
Observations	12,365	12,365	12,365	5,633	43,262		
Log likelihood	-7,629.220	-7,623.348	-7,606.624	-3,470.001	-13,538.890		
Akaike inf. crit.	15,286.440	15,282.700	15,267.250	6,980.003	27,113.780		
Bayesian inf. crit.	15,390.360	15,416.300	15,467.660	7,112.731	27,269.930		

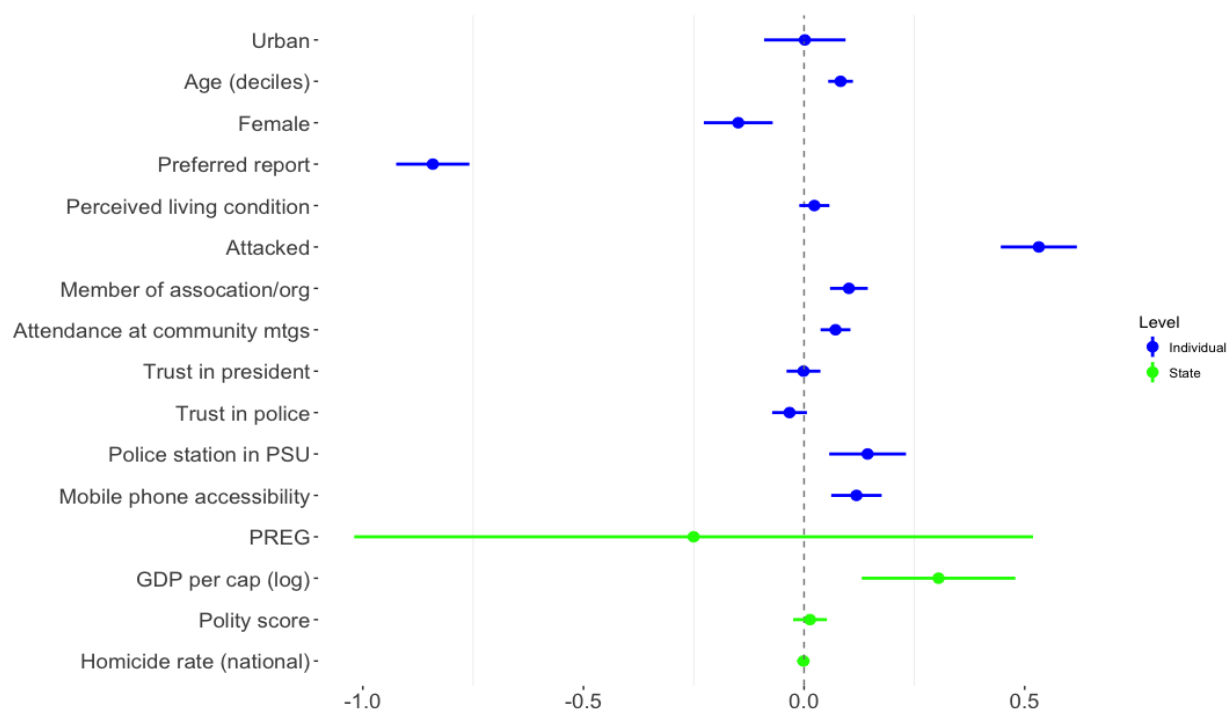
*p<0.1; **p<0.05; ***p<0.01

ⁱ Varying slopes were calculated for the trust in president, trust in police, and police station in PSU variables (see figures 3-5). This occasionally generates model convergence warnings. However, it is assumed here that correct maximum likelihoods were established, since the highest calculated gradients were very near the convergence threshold levels (gradient < 0.001).



Before reviewing the performance of specific variables of interest, it is useful to consider the influence of country-level variables on the reporting of crime. The intraclass correlation coefficient (ICC)⁵ helps capture some of this influence, specifically the amount of total variation in reporting that is reflected in the variation in reporting between countries. The ICC for the multilevel model with country-level intercepts but no country-level predictors is 0.089, meaning that roughly 9% of the variation in the reporting of crime is due to unobserved country-level factors (see Table 2, M1). When country-level data such as PREG scores and GDP per capita income are added to the model (see M2), the ICC falls to 6.5%. In other words, these country-level variables absorb about 2.5% of the unobserved variation. Despite the differences in overall reporting rates across countries observed in Figure 1, country-level factors do not appear to account for a significant amount of these differences.

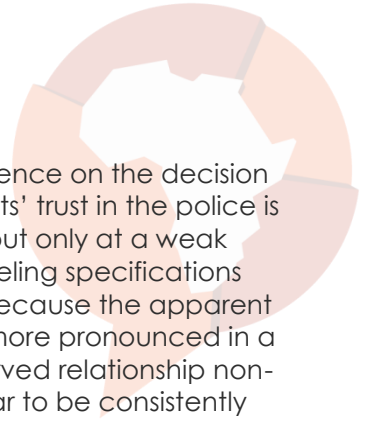
Figure 2: Plots of coefficient values and 95% confidence intervals for M2



Most country-level variables do not display strong associations with individual-level reporting (see M2 and Figure 2). The prevailing level of democratic governance, the diversity of politically active ethnic groups, and national-level crime rates do not exhibit strong or consistent relationships with whether individuals choose to report crimes. By contrast, GDP per capita does appear to be positively linked with individuals' decision to report crimes. This may be due to variation in overall state strength or capacity, for which GDP per capita is often used as a proxy. The capabilities of the state or specific institutions such as the police may affect an individual's decision to report a victimization.

The value of the coefficient for trust in the president is small and not significant (see M2 and Figure 2). The data do not support Hypothesis 1. Higher levels of trust in national leadership are not associated with higher probabilities that a crime will be reported. Even when this variable is allowed to vary across countries, the results are fairly consistent (see Figure 3, which contains random slopes from M3). Only in Togo does a respondent's trust in the president seem to increase the likelihood that a respondent will report a crime to the police.

⁵ Here calculated as $\frac{\sigma_{var\ country}^2}{\sigma_{var\ country}^2 + \frac{\pi^2}{3}}$, with $\frac{\pi^2}{3}$ the assumed individual-level error variance in logistic regression.



Similarly, trust in the police does not appear to display a consistent influence on the decision to report a crime. In some model output (see M2 in Table 2), respondents' trust in the police is negatively related with individual reporting and statistically significant but only at a weak threshold ($p < 0.10$). This weak relationship disappears under other modeling specifications (see M3 in Table 2). This change in statistical significance likely occurs because the apparent effect of an individual's trust in the police on the reporting of crimes is more pronounced in a few select countries. Specifically, only in Liberia and Malawi is the observed relationship non-zero and negative (Figure 4). Overall, trust in the police does not appear to be consistently associated with variation in the reporting of crimes to law enforcement across most countries, though it does display some negative relationship in two specific countries.

Figure 3: Varying slopes by country for trust in president

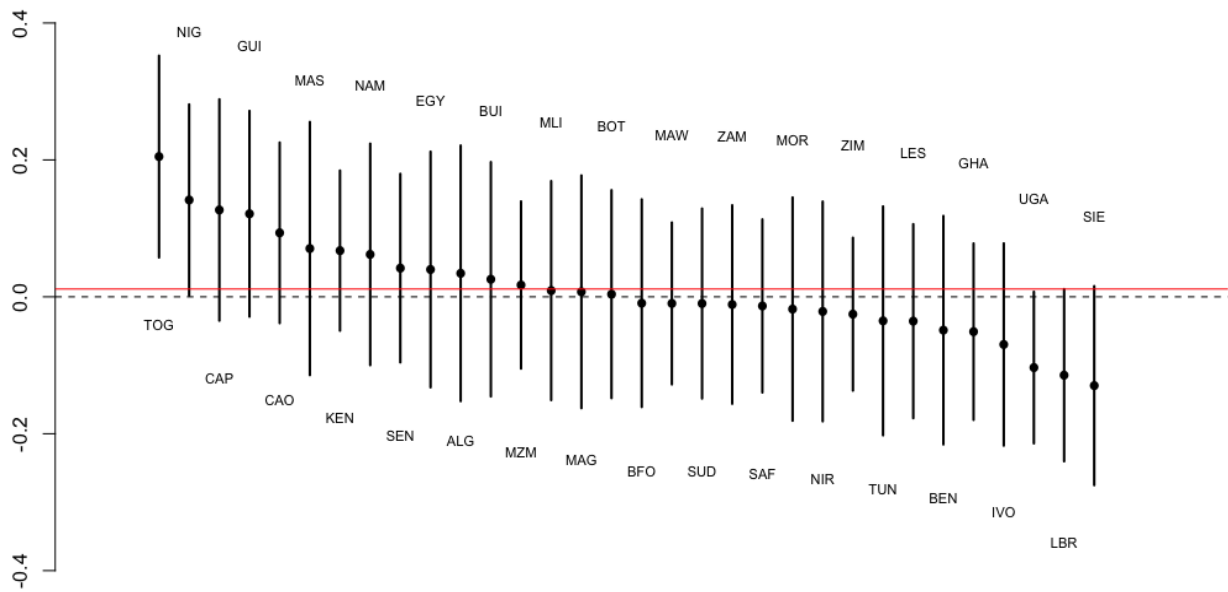


Figure shows coefficients with 95% confidence intervals. Red line is weighted average or "fixed" effect.

Figure 4: Varying slopes by country for trust in police

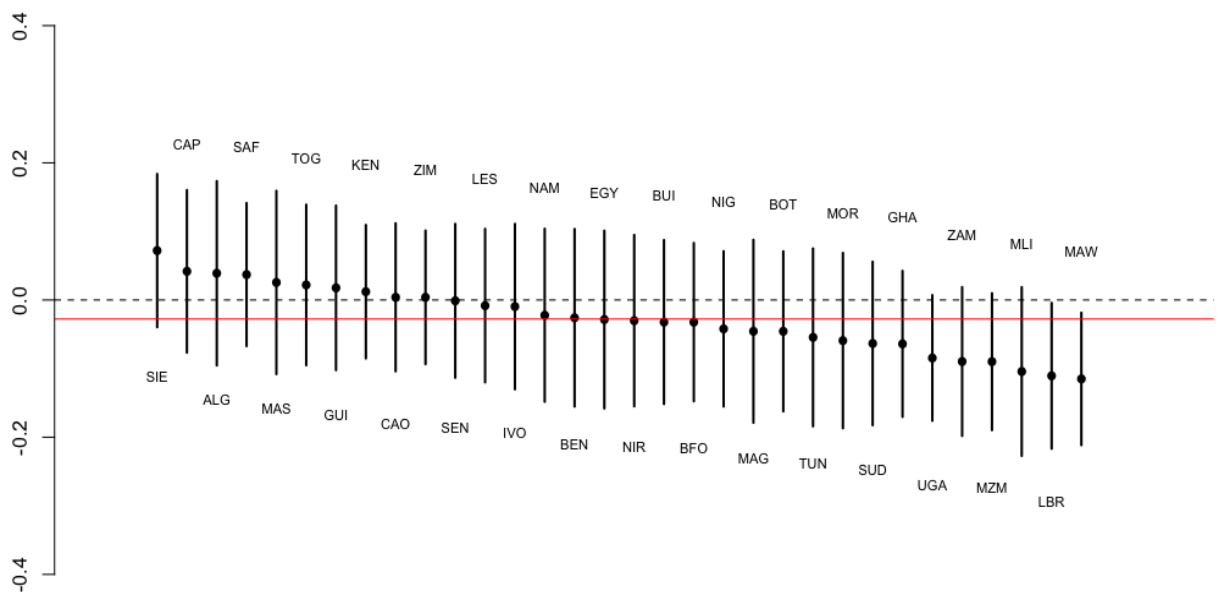


Figure shows coefficients with 95% confidence intervals. Red line is weighted average or "fixed" effect.

The data and modeling results provide affirmative support for Hypothesis 3: The proximity of police stations and availability of mobile phones are both associated with higher reporting. However, when varying slopes are calculated for the influence of a police station in a respondent's PSU on reporting, the relationship appears more uncertain (see Figure 5). In seven countries – Mali, Mozambique, Zambia, Liberia, Uganda, Nigeria, and Ghana – there is a measured positive relationship. In most others, the coefficients are positive, but the results are not statistically different from zero. Still, the differences are substantial in some countries. For instance, in Mali the coefficient for the presence of a police station in the respondent's PSU is 0.57, meaning that all else equal the presence of the police station is associated with a 14-percentage-point increase in the probability of a Malian reporting a crime.⁶ Mali is somewhat of an outlier compared to other countries, but overall, mere access to the police does appear to positively influence the reporting of crimes. Access to a mobile phone is associated with a 2.5-percentage-point increase in the probability of a crime being reported. Unfortunately, due to the nature of the data, it is not possible to easily calculate varying slopes across countries for mobile-phone ownership.⁷

Figure 5: Varying slopes for police station in PSU variable

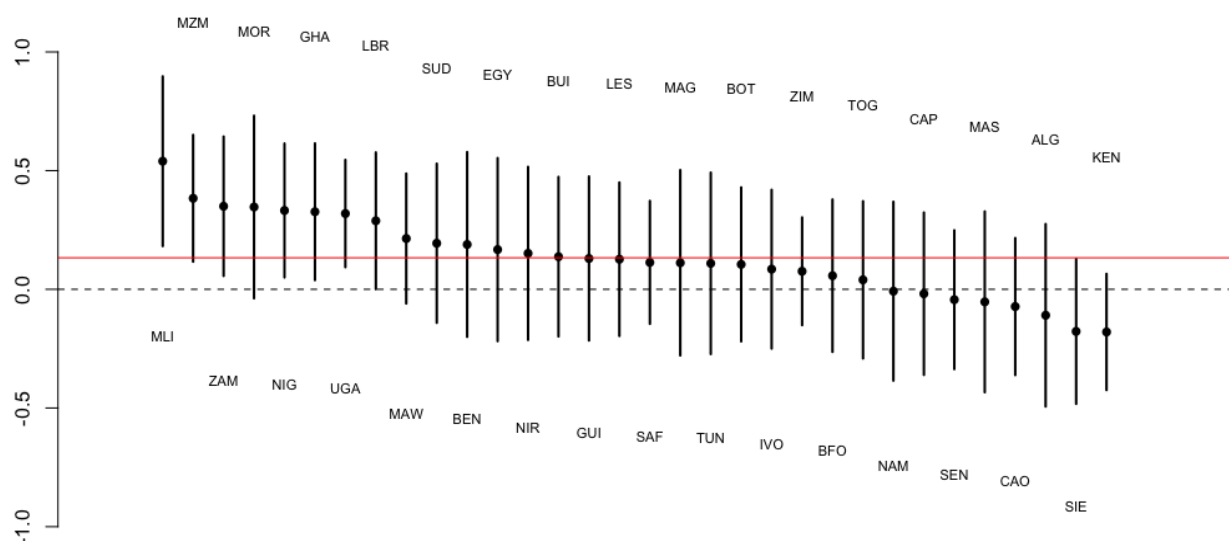
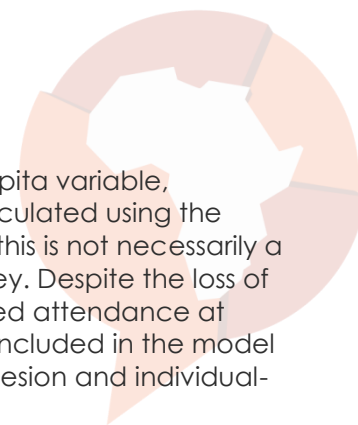


Figure shows coefficients with 95% confidence intervals. Red line is weighted average or "fixed" effect.

Hypothesis 4 – that community cohesion positively affects an individual's probability of reporting a crime to the police – is the most difficult to test. As previously discussed, it requires the creation of a community-level measure of cohesion, which was done here by aggregating and averaging respondents' answers to questions about attendance at community meetings and membership in voluntary associations within each enumerator area. Unfortunately, enumerator areas were not consistently tracked for all respondents in the Afrobarometer survey, so this procedure results in a significant loss of data. Of the 12,365 respondents across 32 countries who reported a victimization and are available for evaluation of other hypotheses, only 5,633 in 23 countries can be linked to an identifiable enumerator area. These respondents are spread across 2,474 enumerator areas or "communities," each containing two to eight respondents. Despite this loss of data, the modeling output using just these 5,633 individuals is fairly similar to that of the larger sample of

⁶ This calculation is based on Gelman and Hill's (2006) "divide by four" rule.

⁷ Doing so complicates the model's ability to converge on parameter estimates. This may be due to some quasi-separation within certain countries or to the inclusion of many variables in the model.



respondents (see M4 in Table 2). With the exception of the GDP per capita variable, parameter estimates and their significance are fairly close to those calculated using the more complete sample (compare M2 or M3 with M4), suggesting that this is not necessarily a biased subset of the pool of victims of crime in the Afrobarometer survey. Despite the loss of data, an advantage of this approach is that an individual's self-reported attendance at community meetings or membership in voluntary associations can be included in the model to better isolate any measurable relationship between community cohesion and individual-level reporting of crimes.

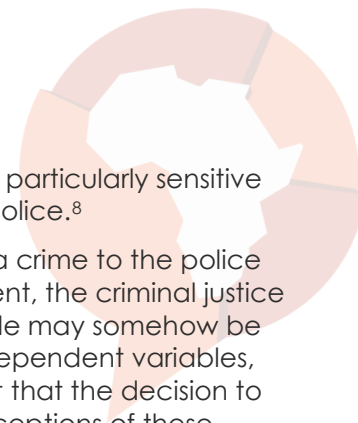
As might be expected, individuals' self-reported level of community cohesion through community meeting attendance and association membership is positively related to reporting of crimes. This may be more a reflection of an individual's character traits than an exogenous influence of meeting attendance or association membership. To test the effect of overall community cohesion on an individual's probability of reporting a crime independent of whether an individual herself attends meetings or is a member of an association, a separate community cohesion variable is included. Unexpectedly, the coefficient for this community cohesion variable is negative, though it is not statistically significant (see M4 in Table 2). Contrary to the expectation of Hypothesis 4, there does not appear to be a consistent relationship between higher levels of cohesion within communities and whether an individual will report a crime to the police.

Aside from the specific hypotheses and related variables of interest being examined, the findings for several control variables are also notable. Older respondents appear to be more likely to report crimes in Africa. These results are stronger than conclusions from previous research, particularly the range of studies analyzed by Skogan (1984), which found no effect for age. However, Goudriaan et al. (2006) did find a weak but positive relationship between age and reporting. Consistent with many other studies on reporting, whether an individual was assaulted displays a strong positive association with whether the crime is reported to the police. An even stronger influence on individual reporting appears to be respondents' preference for alternative entities or institutions for dealing with crime, including community leaders, local gangs, or private security firms.

Perhaps most surprising, the analysis here finds that women in Africa appear less likely to report a crime, whereas the opposite is observed in many developed countries. This is a troubling result, and difficult to explain. Women may be disinclined to report crimes because more often than not they will be reporting to a male officer. In Nigeria in 2010, for example, fewer than 13% of police officers were female. Women accounted for 20% of all officers in Ghana in 2007 and 23.5% in South Africa in 2011. Yet these numbers are not much lower than those in the United States, the United Kingdom, or other developed countries (Prenzler & Sinclair, 2013). Any disinclination to report among African women could also be influenced by the nature of the victimization, such as domestic incidents or sexual assaults, and the social stigma or household consequences that can accompany these. However, the model output suggests that women are less likely to report even crimes that do not involve an attack. Some sort of cultural factor may be at work, but it would be one shared across some very diverse countries. The finding is one that would benefit from further examination and research.

Threats to inference: Endogeneity and confounding variables

The nature of the data poses several problems for inference. Specifically, some variables may be endogenously associated with reporting, and others may be affected by confounding factors. The measured rates of victimization in the data could also be incorrect, as the survey enumerators may encounter the same reticence or withholding of information about victimization that the police clearly do. This would lead to relevant observations being



excluded from analysis. Respondents may be falsifying their answers to particularly sensitive questions, such as those about their perceptions of the presidency or police.⁸

A respondent's experience of victimization and the decision to report a crime to the police may indirectly affect and even alter their perceptions of the government, the criminal justice system, and national leadership. In other words, the dependent variable may somehow be endogenously linked to the "trust in president" and "trust in police" independent variables, generating less reliable tests of hypotheses 1 and 2. To be clear, it is not that the decision to report a crime has some sort of direct influence on a respondent's perceptions of these institutions. Those phenomena should be independent. However, a respondent's experience with the criminal justice process after reporting may alter their original pre-victimization perception of the police and the president, and only this revised perception is captured in the subsequent Afrobarometer survey interview.⁹ Unfortunately, short of conducting panel surveys, there is little that can be done to capture victims' genuine perceptions of national leadership and the police at the time of their victimization.

Respondents may not be representing their true perceptions of government institutions, particularly in more repressive contexts. Other studies have detected this behavior in Afrobarometer surveys, particularly in more autocratic contexts (Tannenberg, 2017). This "autocratic trust bias" may introduce biases in the analysis here, complicating the reliability of the results. Fortunately, the use of a multilevel procedure permits the analysis of the variation between countries in the influence of trust questions on reporting. If the "autocratic trust bias" is in fact systematically affecting the results and it is assumed that victims are truthfully answering whether they did or did not report victimizations, then differences in calculated coefficients of the trust in president variable on reporting between democratic and autocratic countries should be apparent. Figure 3 suggests that no such differences exist, with similar parameter estimates for Zimbabwe and Botswana or for Algeria and Senegal. The one outlier appears to be Togo, where the strong positive relationship between trust in the president and the reporting of crimes may be the result of "autocratic trust bias." However, it is possible that if respondents in autocratic contexts are misrepresenting both their trust in the president as well as whether they reported victimizations to the police, then the results here may be less valid.

Only 12,365 respondents who reported that they were the victims of attacks or theft are featured in this model. Roughly 40,000 other respondents surveyed were excluded from the analysis, since they did not report that they were subjects of a crime. Of course, some of those excluded respondents may have been victimized and not reported it to the survey enumerator for the same reasons that many others did not report their victimizations to the police. The model results, then, may be biased due to the exclusion of these reticent victims. To test whether excluded respondents might change the model results, the multilevel regression was re-run including all survey respondents.¹⁰ Those who did not report any victimization were coded as not having reported a crime to the police (DV = 0). The values and significance of nearly all of the variables of interest – those proxies for the hypotheses under review – remained fairly consistent in value and statistical significance (see Table 2, M6), suggesting that the findings are not biased by under-reporting of victimizations. The "trust in police" parameter, however, does become significant and negative. This may be

⁸ Regarding any multicollinearity concerns, none of the coefficients or standard errors of the model coefficients are abnormally large. Additionally, the model was re-run excluding a single variable on each run to determine whether the standard errors and significance of the coefficients changed. None did.

⁹ Question ordering in the survey may also influence an individual's responses. Judging by the Afrobarometer Round 5 codebook, questions about victimization and reporting of crimes were fairly early in the lengthy questionnaire, within the first 15 questions raised. Trust of national institutions, including the presidency and the police, come much later, following roughly 100 intervening questions.

¹⁰ "Don't knows" and missing observations remained excluded from analysis.



due to the fact that many respondents who did not self-report victimization also reported higher trust in the police. Indeed, this may be evidence of the previously mentioned endogeneity problem.

Conclusion

Crime is a serious security and development challenge in Africa. It may also be contributing to and exacerbating the fragility of states and state-society relationships on the continent, according to some perspectives. Policing is an important element of crime control, and the reporting of crimes to law enforcement by victims and citizens is a critical step in addressing these challenges and strengthening the rule of law. To better understand why Africans report crimes to the police, this study applied multilevel regression techniques to survey data from 32 African countries. The results imply possible policy measures for improving police-citizen relations and strengthening the rule of law and the formalization of criminal justice on the continent.

First, while it is often rightly claimed that “context matters” when it comes to explaining the peculiarities of individual behavior, it is notable that the effect of country-level factors on individual reporting appears to be lower than one might expect. Relatively wealthier countries experience more reporting of crimes, but other state-level variables do not seem to influence reporting. In Africa, the decision to report a crime seems to be driven primarily by individual-level and immediate considerations. From a policy perspective, increasing crime reporting requires focusing on individual-level experiences and conditions, while overall country-level or structural conditions do not pose insurmountable obstacles.

It also appears that politics and negative perceptions of the police represent weaker barriers to increasing the reporting of crimes to the police than is commonly believed. The analysis of Afrobarometer data does not support claims that the reporting of crime is influenced by an individual's trust in the president, suggesting that although police forces in Africa may be highly politicized and used for political purposes by national leaders, such politicization may not consistently influence whether victims report crimes to the police. Likewise, though the police in Africa are often described as abusive and corrupt, victims' self-reported trust in the police does not display a consistent relationship with the reporting of crimes in most countries. These findings are not meant to suggest that there are no adverse consequences to the politicization of police forces in Africa or to the lack of trust between citizens and police, or that the quality of police response to reports of victimizations is adequate. They do suggest, however, that these factors may not influence the reporting of victimizations as much as may often be assumed.

By contrast, a victim's access to the police, as measured by their proximity to a police station and their access to a mobile phone, has a measurable positive association with reporting. Increasing the rate of reporting crimes may be possible through simple technical solutions that make police more accessible to African citizens. Together, these findings could be interpreted as encouraging for the prospects of formalizing law enforcement. Politics may be less of a challenge to getting the state more involved in crime control, while simpler practical matters such as access may influence individuals' outreach to the police.

Community cohesion, unfortunately, does not display a strong association with reporting of crimes, and the association may even be negative given the sign of the coefficient in the modeling results. This may seem counterintuitive at first glance but is less so on further reflection. It is highly plausible that more cohesive communities have developed robust informal or “self-help” options for addressing crime, resulting in lower rates of reporting to the police. This is reinforced by the strong value of the preferred reporting institution parameter estimate, which may capture individuals' preferences for drawing on local security or vigilante groups. Regardless, the results here do not suggest a strong or consistent relationship, but further research and analysis may be warranted, particularly given



increasing interest in community policing and similar approaches that involve community forums and local organizations in identifying crime-control policies and priorities.

Further research is also necessary to better understand why women appear to be less likely to report victimizations to the police. Several factors could play a role, including the nature of the victimization or women's perceptions of and experiences with the police. Low reporting may also be reflective of broader imbalances and discriminatory practices in gender relations. Identifying and rectifying the factors that disincline African women from reporting crimes may have a substantial impact on overall reporting rates, potentially more than most measures given that women compose half the population in any given state.



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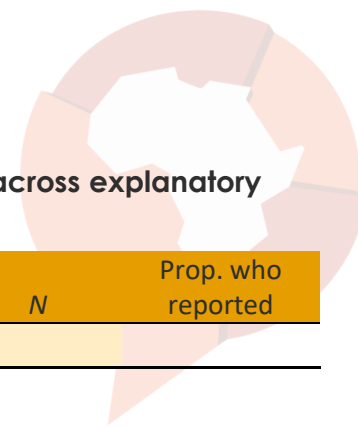


Appendix

Counts and descriptive statistics

Table A.1: Frequency counts and reporting proportions by country

Country	Reported incident?		Prop. = "Yes"
	No	Yes	
Algeria	44	116	0.73
Benin	175	50	0.22
Botswana	101	215	0.68
Burkina Faso	192	100	0.34
Burundi	150	87	0.37
Cameroon	291	177	0.38
Cape Verde	138	112	0.45
Côte d'Ivoire	190	87	0.31
Egypt	55	42	0.43
Ghana	458	138	0.23
Guinea	159	78	0.33
Kenya	340	422	0.55
Lesotho	96	163	0.63
Liberia	306	220	0.42
Madagascar	95	45	0.32
Malawi	432	240	0.36
Mali	155	59	0.28
Mauritius	41	85	0.68
Morocco	93	90	0.49
Mozambique	328	323	0.50
Namibia	84	160	0.66
Niger	156	63	0.29
Nigeria	427	168	0.28
Senegal	308	148	0.33
Sierra Leone	214	158	0.43
South Africa	240	413	0.63
Sudan	185	151	0.45
Togo	310	76	0.20
Tunisia	51	75	0.60
Uganda	607	378	0.38
Zambia	223	148	0.40
Zimbabwe	334	601	0.64
Total	6,977	5,388	
Average across countries			0.44

**Table A.2: Frequency counts and proportion of crimes reported across explanatory variables of interest**

Variables / Answers	N	Prop. who reported	Variables / Answers	N	Prop. who reported
<i>Trust president?</i>			<i>Access to mobile phone?</i>		
Not at all	2,320	0.43	No/Outside of household	2,012	0.35
A little	2,779	0.44	Through household	1,101	0.34
Somewhat	2,982	0.45	Personally own	9,252	0.47
A lot	4,284	0.43			
<i>Trust police?</i>			<i>Member of vol. assoc. or comm. grp?</i>		
Not at all	3,408	0.43	Not a member	7,224	0.43
A little	3,225	0.45	Inactive member	1,711	0.42
Somewhat	2,930	0.47	Active member	2,626	0.47
A lot	2,802	0.40	Leader	804	0.46
<i>Police station in PSU?</i>			<i>Attendance at comm. mtgs in last 12 months?</i>		
No	7,299	0.41	Never	1,381	0.44
Yes	5,066	0.48	Would if had chance	3,047	0.38
			Once or twice	2,047	0.44
			Several times	3,330	0.47
			Often	2,560	0.45

Table A.3: Descriptive statistics for country-level variables

Statistic	N	Mean	St. dev.	Min	Max
PREG	32	0.384	0.232	0.000	0.710
Homicide rate	32	16.938	13.033	1.100	56.900
GDP per cap	32	2,086.98	2,260.818	235.705	8,580.086
Log GDP PC	32	7.138	1.013	5.463	9.057
Polity 2	32	3.688	4.603	-6	10



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Core partners:



**Center for Democratic Development
(CDD-Ghana)**

95 Nortei Ababio Street, North Airport
Residential Area
P.O. Box LG 404, Legon-Accra, Ghana
Tel: +233 21 776 142
Fax: +233 21 763 028
www.cddghana.org



**Institute for Development
Studies (IDS), University of
Nairobi**

P.O. Box 30197, Nairobi, 00100,
Kenya
Tel: +254 20 2247968
Fax: +254 20 2222036
www.ids.uonbi.ac.ke



Institute for Empirical Research in Political Economy (IREEP)

Arconville, Lot 104 - Parcelle J, 02 BP: 372, Cotonou,
Republique du Benin
Tel: +229 21 363 873/ 229 94 940 108
Fax: +229 21 362 029
www.ireep.org



Institute for Justice and Reconciliation (IJR)

105 Hatfield Street, Gardens, 8001, Cape Town,
South Africa
Tel: +27 21 763 7128
Fax: +27 21 763 7138
www.ijr.org.za

Support units:

**MICHIGAN STATE
UNIVERSITY**

Michigan State University (MSU)
Department of Political Science
East Lansing, MI 48824, USA
Tel: +1 517 353 6590; Fax: +1 517 432 1091
www.polisci.msu.edu



**University of Cape Town (UCT)
Institute for Democracy, Citizenship
and Public Policy in Africa**

Leslie Social Science Building
Rondebosch, Cape Town, WC 7701
South Africa
Tel: +27 21 650 3827