

How street-level bureaucrats' traits affect community leaders' assessments of the government

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Abstract

Research shows that bureaucrats' performance is shaped by their personal traits, such as public service motivation, cognitive ability, grit, and "big five" personality. What impact do these traits have on citizen assessments of service delivery and governance? To test this question, we randomly assigned police officers to villages during a community-oriented policing program in the Philippines. This program involved meetings between police officers and community leaders – citizens who serve as key conduits between the population and the state. We find that community leaders' assessments of individual officers were meaningfully affected by officers' personal traits, but those traits matter less for assessments of broader institutional efficacy. These findings suggest that bureaucrats' traits can improve public service provision by shaping how citizens approach encounters with specific government representatives. However, they place limits on the suggestion that exceptionally positive (or exceptionally negative) bureaucrats can shape attitudes towards state institutions more generally.¹

Keywords: Bureaucracy, Personality, Government Legitimacy, Policing, Philippines

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Street-level bureaucrats, such as public school teachers, social workers, and police officers, play a crucial role in public service provision and act as *de facto* policymakers (Lip-sky, 1980). Consequently, the success of government programs hinges on the qualities of bureaucrats who implement them, including their public service motivation (Perry, 1996), cognitive ability (Wechsler, 1987), grit (Duckworth and Quinn, 2009), and “big five” personality traits (John, 1990). While scholars agree that individual traits impact bureaucrat performance (Pepinsky, Pierskalla and Sacks, 2017), their effects on citizen-state relations remain less understood. Most research focuses on *objective* performance measures like attendance (Callen et al., 2015) and responsiveness (Dynes, Hassell and Miles, 2022). However, the *subjective* evaluations of citizens, particularly community leaders who mediate between the population and the state, may be more crucial for expanding state capacity. Community leaders’ perceptions of government legitimacy and cooperation with state representatives determines states’ ability to maintain order, collect resources, and provide services (Levi, 1988). Despite speculation that individual bureaucrats can influence citizen assessments of the state, empirical evidence remains scarce.

We explore these dynamics through a community policing field experiment in the Philippines, where officers worked with community leaders to address local safety issues. The experiment involved pre-intervention assessments of officers’ traits using surveys and behavioral games, followed by random assignment of officers to communities, effectively randomizing officer traits across treated areas. We find that officers’ traits strongly affected community leaders’ assessments of individual officers. Officers with high ex-ante public service motivation were rated better across various performance metrics. Other traits had mixed effects: surprisingly, higher cognitive ability negatively predicted perceived effort, responsiveness, confidence, and empathy. Grit positively influenced perceived effort, but not other performance dimensions. Among the Big Five Personality traits, extraversion and agreeableness predicted assessments across most metrics. However, these traits had little impact on leaders’ assessments of the police as an *institution*, including perceived police

capacity, intentions, and procedural fairness. The results raise questions about the extent to which interactions with individual officers affect the overall reputation of a police force.

This article offers several key contributions. First, we advance the empirical strategy for identifying the effect of bureaucrats' traits. To our knowledge, our study is the first to randomly assign real-world encounters between bureaucrats and citizens, allowing us to isolate the effects of specific traits from broader organizational and environmental factors. Second, we join [Callen et al. \(2015\)](#) and [Dal Bó et al. \(2021\)](#) in examining the consequences of bureaucrats' traits in the Global South, where enhancing street-level service provision is crucial for improving state legitimacy in low-capacity areas. Finally, we extend a growing literature on community policing ([Blair et al., 2021](#); [Haim, Nanes and Ravanilla, 2024a](#)). Advocates of community policing often claim that personal interactions with police can help overcome negative public perceptions of the police. Our study shows that while individual traits are noted by community leaders, they do not significantly influence broader assessments of the police force. This finding highlights the persistence of institutional reputations and raises questions about the efficacy of reforms focused on individual street-level bureaucrats.

OFFICER TRAITS & CITIZEN ASSESSMENT OF THE POLICE

We posit that bureaucrats' traits influence how citizens assess both the bureaucrats themselves and the government more broadly. Police officers rely on citizen cooperation in encounters during foot patrols, engagement programs, and emergency calls, which is critical to the co-production of public safety. This cooperation depends on perceptions of individual officers and the wider legitimacy of the police ([Sunshine and Tyler, 2003](#)). The cooperation of community leaders, who represent citizens but also function as co-producers of public safety, is particularly vital ([Goldstein, 1990](#)).

We expect that officers with certain traits will excel in performance metrics highlighted by existing research, such as regular attendance at scheduled meetings. Beyond attendance, officers with desirable traits are likely to engage more effectively by devising

and implementing public safety interventions. If such traits lead to better performance, those who interact with these officers should update their evaluations of the officers’ quality. Moreover, if citizens see bureaucrats as *de facto* policymakers, their experiences with individual officers should shape their broader views on government quality. This link between personal interactions and assessments of government institutions is central to the literature on individual bureaucrats (Haim, Nanes and Davidson, 2021).

We focus on four traits that are particularly important in the policing context: **1) Public Service Motivation (PSM)**, defined as the “altruistic motivation to serve the interests of a community of people” (Rainey and Steinbauer, 1999); **2) Cognitive Ability**, specifically working memory capacity and attention, a sub-component of general IQ; **3) Grit**, or the determination to achieve long-term goals; and **4) the Big Five Personality traits**, comprising extraversion, agreeableness, conscientiousness, emotional stability, and openness. In the Supporting Information (SI), we elaborate the theory on how these traits are linked to officer performance.

CONTEXT AND INTERVENTION

We conducted our study in Sorsogon Province of the Philippines, which has a population of 850,000 spread across rural and semi-urban areas. The province’s 800 Philippine National Police (PNP) officers are distributed across 17 municipal stations, each serving about 31 barangays (akin to villages or neighborhoods). Sorsogon was selected as the study site because of the authors’ extensive contextual knowledge and established ties in the area, where we have been conducting research for nearly a decade. Ethical considerations were integral to our research design, as detailed in the SI.

We partnered with the Sorsogon PNP to implement a problem-oriented policing (POP) program in 99 randomly selected barangays. The program included seven monthly meetings between police officers and community leaders. One senior officer and one junior officer from each municipal station was assigned to work intensively with 2-3 elected barangay

council members and 3-5 barangay safety officers called “tanods,” who are similar to community watch members in other contexts. The first two meetings focused on identifying pressing public safety issues and devising joint strategies to solve them. Subsequent meetings were dedicated to implementing the strategies, evaluating progress, and ensuring sustainability.

Our primary outcome measures are based on surveys in which barangay leaders evaluated police officers’ behavior during the community policing intervention. In the rural barangays where our study took place, barangay leaders serve primarily as intermediaries between higher levels of government and their local communities, advocating for their barangay rather than acting as extensions of the national government. In the SI, we delve deeper into the role of barangay leaders within the context of our study and compare these roles to those of ordinary citizens typically examined in the literature.

RESEARCH DESIGN

Our design leverages the random selection of 1) which officers (from 705 eligible officers) participated in the POP intervention, and 2) the specific villages within our sample to which these officers were assigned. The first randomization ensured that community leaders interacted with a representative sample of officers from the province. The second randomization addressed selection bias, a key concern when analyzing the effects of bureaucrats’ traits. By randomizing village assignments, we can rule out the possibility that officers with certain traits were assigned to locations with pre-existing favorable or unfavorable views of the police. Our design does not eliminate the potential confounding effects of other officer characteristics correlated with the traits we study. In the SI, we show that officers’ demographic characteristics are weakly correlated with officers’ personal traits.

Before the intervention, we surveyed all officers using established instruments and behavioral games to measure public service motivation (Perry, 1996), cognitive ability (Wechsler, 1987), grit (Duckworth and Quinn, 2009), and the big-five personality traits (John, 1990). Details on operationalization are provided in SI. To measure outcomes, we asked

community leaders to evaluate 1) the quality of the lead officer assigned to their barangay and 2) institutional police effectiveness, using a series of Likert-scale questions. A total of 284 community leaders from 95 barangays evaluated 95 senior officers. For *individual* officer quality, respondents rated effort, reliability, responsiveness, creativity, trustworthiness, approachability, confidence, empathy, and overall quality. For *institutional* effectiveness, leaders assessed police capacity and intentions (1. acts on citizen feedback; 2. takes citizen reports seriously; 3. responds timely), procedural justice (4. is not corrupt; 5. provides equal service) and overall quality (6. is trustworthy; 7. provides satisfactory service).

We estimate the main effects with Ordinary Least Squares (OLS) regression:

$$Y_{ijk} = \beta_0 + \beta_1 PSM_j + \beta_2 Cognitive_Ability_j + \beta_3 Grit_j + \beta_4 BigFive_j + \Gamma' X_k + \epsilon_{ijk}$$

Here, Y_{ijk} represents the outcome measure for community leader i who interacted with officer j in village k . The variables PSM_j , $Cognitive_Ability_j$, $Grit_j$, and $BigFive_j$ are the z-scores of the indices measuring these traits for officer j who was randomly assigned to leader i 's barangay. To enhance precision, we control for X_k , a vector of village-level characteristics (population, gender and age distributions, education, household size, religion, rebel presence, crime rate, distance to police station). Errors are clustered at the officer level. In the SI, we show that the results are robust without control variables, and remain consistent when adjusting for officer characteristics (gender, age, rank, years served, education), community leader characteristics (gender, age, role, education, employment, income, assets, years resided), and traits of the junior officer on the POP team.

RESULTS

Individual Officer Assessments

Figure 1 presents the heatmaps of the t-statistics for the relationships between officer traits and community leaders' assessments of individual police officers and broader police insti-

tutions. The top-left and bottom-left heatmaps present the results for community leaders’ assessments of individual police officers. We find that officers’ *public service motivation* (PSM) strongly predicts positive assessments, with a one standard deviation increase in PSM associated with a 0.18-point increase on the ‘Overall Quality’ rating (see Table A3 in the SI). Interestingly, *cognitive ability* has a predominantly negative impact, with higher-cognitive ability officers being assessed more negatively overall. We explore the mechanisms behind this in the next section. Officers’ *grit* positively predicts assessments of ‘Effort’ and ‘Empathy,’ consistent with the link scholars frequently draw between grit and effort. However, grit does not significantly affect other measures of quality. To assess whether officer traits jointly influence leader assessments, we conducted an F-test for the joint hypothesis that $\beta_1 = \beta_2 = \beta_3 = \beta_4$ across all outcomes (see Table A3 in the SI). We reject this hypothesis at the 5% level, indicating that officers’ traits collectively predict assessments of their quality.

The bottom-left heatmap reveals significant heterogeneity in the effects of the big-five personality traits (see also Table A4 in the SI). Extraversion is associated with better assessments, while agreeableness is linked to worse assessments. The positive impact of extraversion suggests that sociability and communication are crucial for conveying officer quality to citizens. The negative effect of agreeableness may indicate that agreeable officers engage less to avoid disharmony, which aligns with a previous study on politicians (Dynes, Hassell and Miles, 2022).

Institutional Police Effectiveness

Next, we turn to whether officer traits influenced broader assessments of police institutions. Results in the top-right and bottom-right heatmaps of Figure 1 show that officer traits do not systematically affect these outcomes (see also Tables A5 and A6 in the SI). Traits that most positively (public service motivation) and negatively (cognitive ability) predict individual officer assessments are not significantly associated with institutional assessments. Grit

predicts police effectiveness on certain dimensions (e.g., acting on citizen feedback, providing equal service) but has limited impact on other measures. The Big Five Personality traits also generally do not affect institution-level outcomes, with the exception of agreeableness, which carries over its negative effect to institutional assessments.

While we cannot definitively say that officer personalities do not affect institutional assessments, the magnitude of possible effects within the 90% confidence intervals are quite small. For example, for the trust outcome, the largest predicted increase consistent with our model is 0.07 standard-deviations for public service motivation and 0.15 standard-deviations for the Big Five personality index. These effects are substantially smaller than the 0.2-0.4 standard-deviation shifts seen in individual officer assessments. Moreover, F-tests in Tables A5 and A6 in the SI suggest that, with one exception, officers' traits do not significantly impact evaluations of institutional effectiveness, even when considering all traits together.

DISCUSSION & CONCLUSION

This article demonstrates that in the context of community policing, bureaucrats' traits meaningfully affect community leaders' assessments of individual officers. Positive shifts in these assessments could enhance the co-production of public safety, while mismatched traits may undermine efforts if officers with less favorable traits increase their contact with citizens. In the SI, we show that none of the measured officer traits significantly predict attendance at the POP meetings, a more conventional performance measure in the literature. Instead, our findings suggest that officers' traits influence more intangible aspects of officer performance, which nonetheless have important implications for citizen-state relations.

Of course, the police do not have the luxury of hiring only officers with ideal characteristics. Instead, our findings suggest that if these characteristics are malleable, police training and reform programs could focus on improving them. Although research from psychology indicates that such traits may be immutable, policing literature suggests that social norms within "police culture" can be learned ([Paoline, 2003](#); [Haim, Nanes and Ravanilla, 2024b](#)).

Another approach could involve pairing officers with less desirable traits with those who possess them, fostering opportunities for monitoring, sanctioning, and leading by example.

Still, individual officer traits have minimal impact on citizens' institutional assessments of the police, raising doubts about whether interactions with well-suited officers can substitute for broader institutional reforms. The policy implications depend on why the link between individual and institutional assessments is weak. One possible explanation is the persistence of government perceptions; a lifetime of interactions with officers of a certain type or observations of institutional behavior may not be easily changed. Shifting these attitudes may require large-scale, long-term personnel changes that signal leadership intentions or the average traits of all officers.

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BIOGRAPHICAL STATEMENTS

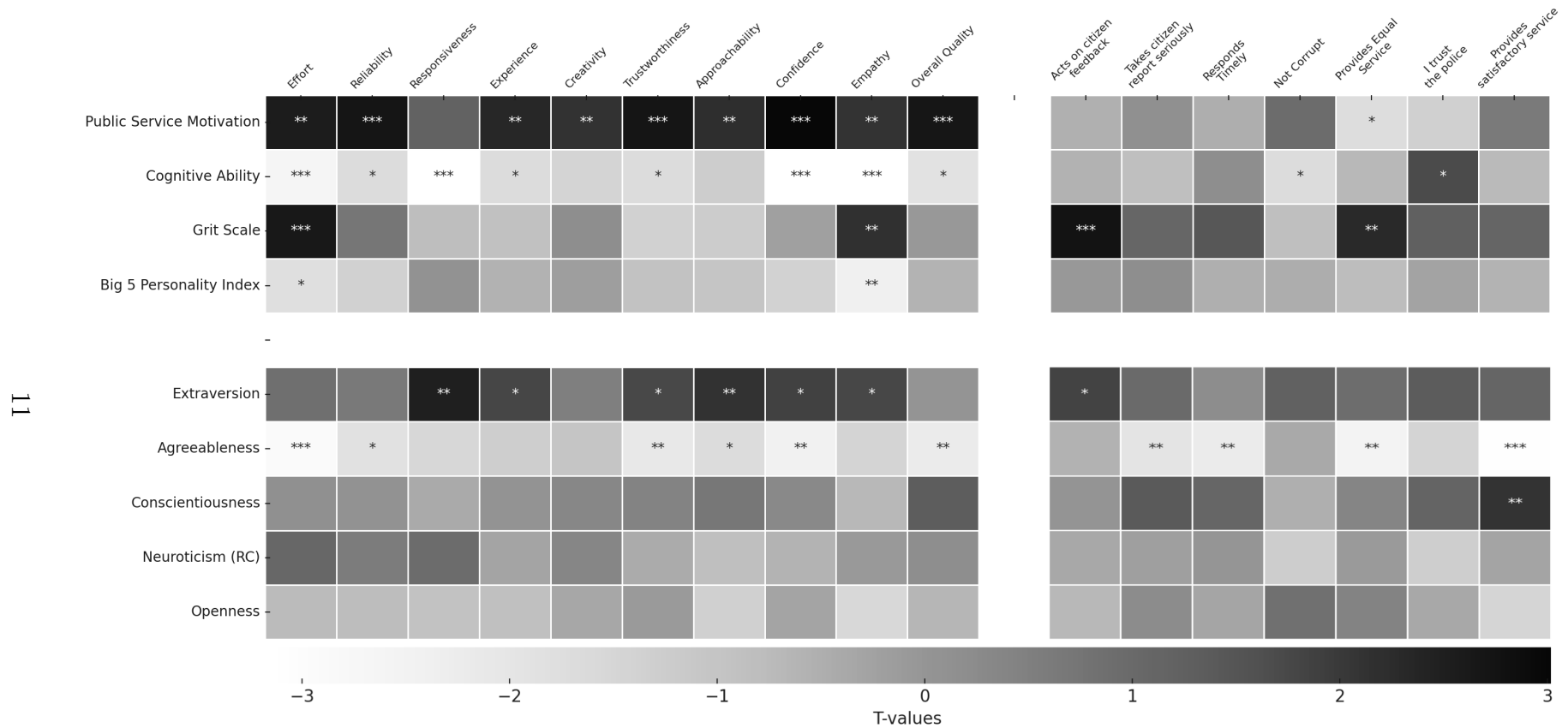
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Figure 1: Public Service Motivation, Cognitive Ability, Grit, Big 5 Personality and its Sub-components, and Community Leaders' Assessments of Individual Officers and Police Effectiveness.



Notes: The heatmap is divided into four quadrants, each displaying T-statistics for the relationships between officer traits and community leaders' assessments of individual police officers and broader police institutions. The top-left quadrant corresponds to Table A3 in the SI, showing the relationships between Public Service Motivation, Cognitive Ability, Grit Scale, and the Big 5 Personality Index with community leaders' assessments of individual police officers. The top-right quadrant corresponds to Table A5 in the SI, focusing on community leaders' broader assessments of police institutions. The bottom-left and bottom-right quadrants correspond to Tables A4 and A6 in the SI, respectively, extending the analysis to the sub-components of the Big Five Personality traits. Statistical significance is indicated by *** ($p < 0.01$), ** ($p < 0.05$), and * ($p < 0.10$). The heatmap's color gradient represents the magnitude of the T-values, with darker shades indicating higher absolute values, where positive T-values reflect positive relationships and negative T-values reflect negative relationships.

Supporting Information for: “How street-level bureaucrats’ personalities affect community leaders’ assessments of the government”

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A.1 Description of One Sorsogon Reloaded Program

We implemented the Problem-Oriented Policing (POP) intervention, called One Sorsogon Reloaded, from December 2017 through May 2018. The POP intervention centered around the creation of problem oriented policing teams in each treatment barangay (i.e. village). We provided participating local officials and police officers with a small stipend to offset the time they devoted to each meeting. The POP teams analyzed in this note consisted of two PNP officers and about ten civilian community leaders from the barangay, giving each team both local knowledge and the resources and expertise of the PNP. The intervention was purely additive; Preexisting channels of communication between the barangay leaders and the PNP remained open and available to all POP teams as well as in control barangays.

Each POP team met once per month in a suitable location within the barangay like the barangay hall, school building, or church. If a suitable location in the barangay was not available, the meeting occurred at the closest municipal police station. A member of our research staff attended and monitored each meeting, but did not participate in it. Teams used Meeting 1 to review information about problems in their barangays and identify a relevant issue that they would focus on over course of intervention period. We provided each team with aggregate statistics from our baseline survey detailing types of crime that citizens experienced most often and issues that they said were most important to them. We also provided anonymized logs of any SMS tips sent to PNP during preceding months that referenced their barangay, though these were unavailable for most barangays because so few messages included sender's barangay. After reviewing this information during meeting, teams interviewed citizens about public safety before start of Meeting 2.

At Meeting 2, teams decided on which issue to focus on and began crafting strategy to address the selected issue. By end of Meeting 3, the POP team provided research staff with proposed budget of up to 5,000 pesos (approximately \$100 US) for implementing their strategy.

Many teams focused on stepping up tanod (semi-professional community security officers similar to community watch members) foot patrols in problematic areas, and spent budgets on basic equipment like flashlights, whistles, rain ponchos that would allow tanods to conduct more patrols. Fewer barangays created infrastructure improvements. For instance, to discourage vagrancy and combat public intoxication, barangays erected street lights in strategic locations. Some barangays also installed road safety signage. Finally, many POP teams addressed problems like juvenile delinquency and public intoxication by creating activities in which at-risk individuals could participate. One POP team purchased sports equipment that school-age children could loan from the barangay hall after school. Another team used their funds to create a community garden tended to by at-risk youth.

Teams spent months 4, 5, and 6 of intervention period implementing their strategies before each participating barangay held a culminating event reinforce public knowledge of their activities and discuss ways to continue activities that would improve public safety in future.

Of course, the POP team meetings were not the only interactions that community leaders and civilians might have had with PNP officers, and the officers assigned to the POP team were not the only ones who could plausibly have visited the barangay during the intervention. Even so, the visits by the assigned officers likely constituted a significant portion of citizen-police interactions during the intervention period. Treatment officers were strongly encouraged (though not required) by PNP leadership to visit their assigned barangays between the monthly POP meetings. Although we do not have data on how often officers visited each barangay, our field research staff (who attended each POP meeting) reported that most treatment officers visited their assigned barangays approximately once between each of the monthly meetings on average, and that discussions during the POP Meetings often focused on issues officers observed during their visits. 38% of the community leaders in our sample reported that they saw police officers patrol in their barangays once per month or less at baseline, and 40% of respondents said they had not contacted the police about suspicious or criminal activity in their barangay during the six-month period prior to the intervention. In other words, even a single visit between meetings by the participating officers constitutes a substantial increase in exposure relative to baseline.

Most barangay leaders occasionally interacted with other officers during the intervention period. However, barangay leaders' interactions with the assigned officers still made up a substantial portion of their interactions with police overall. On our survey of barangay leaders *in barangays that did not receive the problem oriented policing program*, only 51% reported that they observed PNP officers patrolling on foot at least once per week, and 26% reported seeing PNP officers patrolling in vehicles at least once per week. In other words, interactions with PNP officers other than those assigned to the POP teams were, on average, quite rare. This means that for most barangay leaders, their assigned POP officer was by far the most intensive contact they had with police officers during the intervention period. Furthermore, because the barangays to which officers were assigned to implement the POP intervention were randomized, these officers' personalities are orthogonal to the personalities of the (non-random) officers assigned to patrol these barangays as part of their regular duties.

The two randomized aspects of officer assignments that we rely on for causal leverage in the present study were conducted within the context of a broader experiment on community policing. We also randomly selected which barangays received the POP treatment

in the first place. There were 298 barangays in Sorsogon eligible for the study: 100 were randomly selected as control barangays (no POP intervention), 99 were randomly selected to receive a version of the POP intervention led *only* by the community leadership (LGU-only), and 99 were randomly selected to receive a version of the POP intervention led by a combination of PNP officers and the community leadership (LGU+PNP). In this paper, our analysis is limited to the latter category of treatment villages in the larger RCT, which is where PNP officers engaged in the POP intervention.¹ The most important implication of the random selection of barangays into the LGU+PNP sample we focus on here is that the barangays analyzed in the present study are representative of all eligible barangays in Sorsogon Province. In the larger experiment, we found that neither the LGU+PNP nor the LGU-only versions of the POP treatment significantly affected citizen or community leader perceptions of the police’s institutional effectiveness. This is reinforced by the findings in the present article, which shows that there were no effects of officer personality traits on community leader assessments of the police’s institutional effectiveness. We present results from the broader experiment in [redacted article] and [redacted chapter]. [Additional redacted details about the broader experiment, including coordination with research teams in other locations].

A.2 Barangay Leaders as Citizens vs. State Actors

In our study, we examine the role of barangay leaders in rural Philippines, highlighting their unique position within their communities. In the small, rural barangays where our study took place, and indeed in most of the Philippines’ 40,000+ barangays, being a tanod or barangay official is not a full-time job or a career. Barangay leaders often function more like informal village leaders found in other parts of the world, with tanods resembling community watch members (Blair et al., 2021). While they are not ordinary citizens, their function and incentives align them more closely with community members rather than state actors. In contrast, for example, county-level officials in the US or *Bezirkbürgermeister* (district/borough leaders) in Germany function more as state actors due to the higher state capacity, formalization of their roles, and their closer integration with government operations. This distinction is crucial for understanding the framing of our study on citizen-state relations.

First, it is important to note that barangay leaders in the Philippines are akin to community representatives who play a significant role in local governance and service delivery. The US Department of Justice’s definition of problem-oriented policing (POP) emphasizes engaging community representatives, who are better positioned to advocate for their com-

¹Four LGU+PNP treatment villages where the lead PNP officer did not complete the survey batteries on personality traits are excluded from the present study.

munity and co-produce public safety. In the Philippines, barangay leaders fulfill a similar role, acting as intermediaries between their communities and higher levels of government.

The median barangay in our sample has a population of 776 residents, a stark contrast to the median population of 24,000 in rural US counties. This smaller community size reinforces the role of barangay leaders as key community members who directly interact with and understand the needs of their constituents.

Several factors differentiate barangay leaders from typical state representatives. One major distinction is the infrequency and informality of their interactions with higher state officials. Barangay kapitans, kagawads, and tanods operate with a high degree of independence from higher levels of government. This independence stems in part from the absence of regularized, formal interactions with other levels of government, including the PNP, further differentiating them from state representatives and reinforcing their role as citizen leaders. Unlike city council members who meet regularly with mayors and other council members, barangay officials lack standing formal meetings with higher-level state officials. This absence of regularized interaction underscores their independence and community-focused role.

Another significant factor is the lack of upward accountability. There is no direct formal line of authority between barangay officials and municipal or provincial leaders. Barangay officials are elected by and accountable to their constituents, much like members of a civil society organization. This structure reinforces their role as representatives of their communities rather than as subordinates to higher government authorities.

Additionally, being a barangay leader is not typically a full-time career. The part-time, informal nature of their roles further aligns them with community leaders rather than professional state actors. This characteristic emphasizes their primary function as community advocates who operate on behalf of their constituents, rather than as career politicians or bureaucrats.

These characteristics position barangay leaders as community-based intermediaries who operate independently from higher levels of government, advocating for their communities rather than serving as extensions of the state.

A.3 Randomization Procedures

As part of the broader One Sorsogon intervention described above, a random subset of barangays were selected to receive the problem-oriented policing (POP) treatment. We then randomly assigned two officers to the “POP Team” in each treated barangay. We used as a sampling frame all officers assigned to the province at the time the study began, aside from the highest ranking administrative and command officers who do not regularly participate

in patrols. As barangays are nested within municipalities, and officers are generally assigned at the municipality level, we blocked on municipality to avoid officers serving on POP teams outside of their assigned area. We further blocked on rank, splitting officers between those with the lower ranks of Police Officer (PO) 1, 2, and 3, and those with higher ranks of Senior Police Office (SPO) 1, 2, 3, and 4, so ensure that each POP team had one lower-ranked officer and one higher-ranked officer.

First, we randomly sorted the list of POs and SPOs assigned to each municipality. We then assigned officers from those randomly-sorted lists, starting at the top, to the list of participating barangays, which were sorted alphabetically. When an officer was not available to participate for some reason, they were replaced with the next officer from the randomly-sorted list. The nature of this randomization means that all officer personality traits are effectively randomized across barangays in our sample.

A.4 Conceptual description of predictors

Public Service Motivation (PSM). A robust literature suggests that PSM, or the “general, altruistic motivation to serve the interests of a community of people, a state, a nation or humankind” (Rainey and Steinbauer, 1999), affects bureaucratic service provision. The workhorse measure of PSM is a 40-item battery of survey questions developed by Perry (1996), which is generally associated with improved service delivery performance by government bureaucrats, even in the absence of material incentives (Perry, Hondeghem and Wise, 2010). Officers who are intrinsically motivated to help citizens improve public safety should be more likely to devote their time and effort to the community policing program, generating positive citizen perceptions.

Cognitive Ability. Individual differences in cognitive ability are important for comprehending and solving complex social problems, crucial aspects of bureaucratic performance. Cognitive ability tends to be a strong predictor of promotion potential and performance within one’s chosen occupation (Schmidt and Hunter, 2004). A commonly used measure of cognitive ability in public administration is the Reliable Digit Span score (Schroeder et al., 2012). This test measures auditory-verbal working memory capacity and attention, a sub-component of general IQ that is particularly important for understanding difficult concepts or tasks like remembering a friend’s telephone number. We expect high-cognitive ability officers to be better suited to problem-solve complex public safety issues, leading to improved performance in the community policing initiative.

Grit. A third trait that we expect to be associated with performance is officers’ passion and determination to achieve long-term goals, referred to by the psychology literature as “grit” (Duckworth and Quinn, 2009). The literature tends to find that grit is a “domain-general trait that promotes ‘showing up’ across diverse life contexts” (Eskreis-Winkler et al., 2014), especially in the face of obstacles to completing a task. We expect high-grit officers will be more likely to perform well in community policing because it involves regularly showing up to see through difficult tasks.

Big Five Personality. Perhaps the most widely referenced traits in the academic literature are the big-five personality traits: extraversion, agreeableness, conscientiousness, emotional stability, and openness. High levels of these traits predict objective measures of bureaucrats’ (in this case, health inspectors) performance in a developing context (Callen et al., 2015). Relatedly, the big-five personality traits have key effects on responsiveness among local politicians (Dynes, Hassell and Miles, 2022). We expect that police officers who score higher on the sub-components of Big Five Personality Index will perform better at community policing. For example, we expect officers to be better suited for interacting with community members when they are more assertive and sociable (extraversion), better able to accord with local norms (conscientiousness), and tend to put others’ needs above their own (agreeableness).

A.5 Data Collection

We carried out surveys of community leaders in each barangay that received a problem-oriented policing (POP) program, both at the start and end of the program. The participants “self-enumerated” their responses on secure tablets with updated security and encryption software installed by Innovations for Poverty Action (IPA), who we hired to administer the surveys. After arriving at the survey site, experienced IPA enumerators provided participants with consent documentation and were available to answer questions about the consent process. Participants were then led to a private place to sit and handed a tablet with the survey open in the iSurvey software mobile application. Enumerators helped the respondent with the self-enumeration procedure while answering two practice questions (“How likely are you to eat adobo this week?” and “I like dogs more than cats. Agree/Disagree”). At this point, enumerators let the participants complete the remainder of the survey on their own unless they requested help with a specific question. Respondents chose via a drop-down on the device what language they wished the survey to be displayed in. When they reached the end of the survey, participants clicked the “Finish Survey” button, which locked their responses and closed the survey. Even enumerators could not access participant responses at

this point. Self-enumeration was possible because most of the local officials and government agency personnel who made up our list of participants were significantly more educated than average citizens in the region, and all of them were literate. Previous research indicates that self-enumeration procedures like these reduce participant discomfort, non-response bias, and sensitivity bias (Nanes and Haim, 2020)

In addition to surveying leaders, we also surveyed police officers who participated in POP programs. The surveys for police officers were also self-enumerated, using a similar informed consent form.

A.5.1 Measuring Police Officer Traits

The traits we consider in this study corresponds to the domains of personal variability according to Roberts (2006).² We consider public service motivation, intellectual ability, personality, and grit.

Public service motivation

We measured police officers’ public service motivation using Perry’s 1996 scale of Public Service Motivation (Perry, 1996), which has become the gold standard in the literature on PSM. This index is constructed based on a questionnaire in which the subject must express agreement or disagreement with each of 40 statements. The questionnaire elicits opinions on the attractiveness of politics, public service, and prosocial activities. The questionnaire is subdivided into six modules labeled “Attraction to Policy Making,” “Commitment to Policy Making,” “Social Justice,” “Civic Duty,” “Compassion,” and “Self-Sacrifice.” Each dimension is an average of responses to several statements that are measured on a 5-point Likert scale, where a 5 represents strong agreement with the statement, and a 1 denotes strong disagreement.

We construct a public service motivation index, which is an equally weighted average of the z-scores of each dimension. Each dimension is standardized based on the mean and standard deviation of all respondents.

Cognitive Ability

To evaluate a respondent’s cognitive ability, the baseline survey involved a Test of Memory for Digit Span. In this test, the examiner reads out loud in one-second interval, a

²Roberts, Brent. 2006. “Personality Development and Organizational Behavior” in Research on Organizational Behavior, B. M. Staw, ed. Amsterdam: Elsevier Science/JAI Press pp. 1–41.

series of digits (e.g., ‘8, 3, 6’) which participants must immediately repeat back. If participants are able to do so without mistake, they are given a longer list (e.g., ‘5, 2, 9, 3’). There are two rounds of the test. In the first round, participants are asked to repeat the digits in the same order as read (forward digit span), and in the second round, they are asked to repeat the digits in reverse order as read (backward digit span). The sum of longest forward and backward digits a participant can recall without making two consecutive mistakes is that participant’s digit span.

Grit

Grit assesses the degree to which individuals can sustain focus and interest, and persevere in achieving long-term goals (Duckworth and Quinn, 2009). To measure grit, we use the Grit Scale (Duckworth et al., 2007). Grit is a combination of passion and perseverance. Passion provides the initial motivation, while perseverance is what sustains one’s efforts over time. Bureaucrats often need to maintain their focus and interest in their work in order to achieve long-term goals, even when it is difficult or they do not feel like it. For example, a bureaucrat might continue working on a project even when it is not popular or when there is a lot of opposition.

Big Five Personality

To measure non-cognitive attributes we examined a set of traits that over time psychologists have grouped into five categories labeled “the Big Five.” These traits are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. We measured the Big 5 personality traits using the Big Five Inventory (BFI) developed by John (1990). This is a 44-item questionnaire. Johnm Naumann and Soto (2008) report on extensive studies validating the BFI both for internal consistency in terms of test-retest reliability as well as convergence with other personality inventories such as NEO Five Factor scale.³

As with PSM this index is constructed as an equally weighted average of z-scores of each dimension reverse-coding neuroticism which is widely considered to be a negative characteristic (the negative of neuroticism is usually labeled “emotional stability”). The standardization was based on mean and standard deviation of all respondents.

³John, Oliver, Laura Naumann and Christopher Soto. 2008. Handbook of Personality: Theory and Research. 3rd edition ed. New York: Guilford Press chapter Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues.

A.5.2 Outcome Measurement: Officer Assessments

To measure community leaders' assessments of individual officers, we asked them: "How would you rate the senior officer on your POP team?" Respondents were then presented with a 7-point likert scales to rate officers on their Effort, Reliability, Communication/responsiveness, Experience, Creativity, Trustworthy, Approachability, Confidence, Empathy, and Overall Quality.

When it comes to measuring community leaders' assessments of officers, we focus on outcomes specific to the senior officer. In our interactions with the PNP prior to the intervention, we observed that higher ranking officers tended to take control over situations like the POP meetings, while lower ranking officers were more deferential. Consequently, we anticipated that community leaders' impressions of officer effort, reliability, and other outcomes would be primarily based on their impression of the senior officer on the POP team. During the piloting phase, we observed that junior officers were indeed following the PNP's partnership protocols by mainly taking notes and assisting the senior officer, who took the lead in interacting with community members. Our field officers, who attended each POP meeting, noted that these protocols were also widely followed during the full rollout of the intervention.

A.6 Summary Statistics

Summary statistics on baseline and endline questions are reported in Tables [A1](#) and [A2](#).

Table A1: Summary Statistics: Police Officer Attributes

	Mean	St. Dev.	Min	Max
Public Service Motivation	0.78	0.38	0	1.88
Cognitive Ability (Digit Span Score)	6.6	1.64	1.5	10
Grit Scale	0.75	0.43	-0.17	1.92
Big 5 Personality Index	0.96	0.34	0.00	1.81
Extraversion	0.75	0.49	-0.5	2
Agreeableness	1.28	0.43	0	2
Conscientiousness	1.38	0.49	0	2
Neuroticism	0.9	0.47	-0.38	2
Openness	0.46	0.47	-0.75	1.7
Female = 1	0.18	0.38	0	1
Age (in years)	38.05	6.71	26	55
Years in Service	12.67	6.35	2	31
Officer Rank	4.02	1.51	2	8
Less than College	0.04	0.18	0	1
Completed College	0.82	0.38	0	1
Completed Post-College	0.15	0.35	0	1
Number of Senior Police Officers = 95				

Table A2: Summary Statistics: Community Leader Attributes and Attitudes and Village Controls

	Mean	St. Dev.	Min	Max
Barangay Kapitan = 1	0.34	0.48	0	1
Barangay Kagawad = 1	0.31	0.47	0	1
Barangay Tanod = 1	0.36	0.49	0	1
Age (in years)	52.14	9.78	24	80
Educational Attainment	1.9	1.4	0	5
Employment Status	1.94	1.34	1	5
Monthly Income (Pesos)	12873	22284	0	300000
Years in Residence	45.17	14.49	5	80
Male = 1	0.9	0.31	0	1
Assets	4.23	8.78	1	88
Years in Service	6.93	5.58	0	33
Population	918	508	162	2839
Share of Male Residents	0.5	0.02	0.45	0.56
Average Household Size	3.26	0.4	2.3	4.65
Share of Overseas Filipino Workers (OFW)	0.02	0.02	0	0.07
Average Education	1.88	0.27	1.38	2.66
Share Age 18-39	0.54	0.05	0.4	0.63
Share of Unmarried Residents	0.28	0.04	0.2	0.39
Share Catholic Residents	0.96	0.04	0.84	1
Share of Indigenous Population	0.01	0.01	0	0.06
Share of Home Goods	0.38	0.03	0.33	0.44
Rebel Presence Rating in 2015	0.26	0.47	0	2
Average Distance From a Police Station (km)	4.17	3.42	0.10	14.59
Baseline Crime Rate	5.15	7.92	0	53
Effort	2	1	-2	3
Reliability	2.05	0.96	-2	3
Responsiveness	1.85	1.1	-3	3
Experience	1.73	1.19	-3	3
Creativity	1.64	1.14	-2	3
Trustworthiness	2.15	1	-3	3
Approachability	2.22	0.92	-1	3
Confidence	2.08	0.98	-1	3
Empathy	1.86	1.11	-3	3
Overall Quality	2.09	0.95	-2	3
Acts on citizen feedback	1.39	0.75	-1	2
Takes citizen report seriously	1.5	0.68	-1	2
Responds timely	1.28	0.82	-2	2
Not corrupt	3.24	0.93	0	4
Provides equal service	1.29	0.8	-2	2
I trust the police	1.52	0.61	0	2
Provides satisfactory service	1.34	0.75	-1	2
Number of Community Leaders = 284				
Number of Barangays = 95				

A.7 Main Results Regression Tables

Table A3: Public Service Motivation, Cognitive Ability, Grit, Big 5 Personality, and Community Leaders' Assessments of Individual Officers

	Effort (1)	Reliability (2)	Responsiveness (3)	Experience (4)	Creativity (5)	Trustworthiness (6)	Approachability (7)	Confidence (8)	Empathy (9)	Overall Quality (10)
Public Service Motivation	0.179** (0.070)	0.206*** (0.076)	0.096 (0.079)	0.239** (0.102)	0.214** (0.100)	0.217*** (0.080)	0.149** (0.067)	0.193*** (0.064)	0.173** (0.082)	0.175*** (0.065)
Cognitive Ability (Digit Span Score)	-0.153*** (0.058)	-0.100* (0.060)	-0.200*** (0.064)	-0.135* (0.081)	-0.100 (0.069)	-0.112* (0.067)	-0.080 (0.063)	-0.183*** (0.058)	-0.191*** (0.060)	-0.100* (0.053)
Grit Scale	0.172*** (0.065)	0.053 (0.073)	-0.066 (0.081)	-0.094 (0.104)	0.017 (0.093)	-0.137 (0.101)	-0.085 (0.069)	-0.014 (0.065)	0.173** (0.080)	-0.004 (0.068)
Big 5 Personality Index	-0.125* (0.071)	-0.109 (0.080)	0.010 (0.094)	-0.063 (0.111)	-0.019 (0.106)	-0.073 (0.079)	-0.077 (0.074)	-0.096 (0.069)	-0.190** (0.080)	-0.050 (0.085)
P-value for F-test	0.000	0.014	0.023	0.042	0.0292	0.030	0.100	0.000	0.000	0.016
Mean of Dependent Variable	2.00	2.04	1.84	1.73	1.64	2.15	2.22	2.07	1.86	2.08
Number of observations	255	255	254	246	249	250	248	248	240	246
R-squared	0.100	0.071	0.096	0.110	0.100	0.082	0.064	0.069	0.104	0.070

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. P-value for F-test is on the joint equality of the four indices. All regressions control for barangay-level controls listed in the second panel of Table A2 in the SI.

Table A4: Sub-components of Big 5 Personality Index, and Community Leaders' Assessments of Individual Officers

	Effort (1)	Reliability (2)	Responsiveness (3)	Experience (4)	Creativity (5)	Trustworthiness (6)	Approachability (7)	Confidence (8)	Empathy (9)	Overall Quality (10)
Extraversion	0.064 (0.074)	0.051 (0.077)	0.236** (0.095)	0.211* (0.118)	0.057 (0.112)	0.151* (0.086)	0.193 (0.091)	0.157* (0.084)	0.173* (0.098)	0.003 (0.094)
Agreeableness	-0.273*** (0.095)	-0.189* (0.101)	-0.151 (0.099)	-0.151 (0.118)	-0.139 (0.133)	-0.244** (0.117)	-0.153 (0.092)	-0.215** (0.088)	-0.152 (0.105)	-0.197** (0.089)
Conscientiousness	0.013 (0.096)	0.010 (0.102)	-0.041 (0.100)	0.010 (0.139)	0.045 (0.132)	0.066 (0.150)	0.068 (0.096)	0.028 (0.097)	-0.077 (0.115)	0.145 (0.108)
Neuroticism (Reverse-coded)	0.101 (0.095)	0.056 (0.098)	0.092 (0.097)	-0.040 (0.134)	0.046 (0.123)	-0.047 (0.110)	-0.076 (0.090)	-0.052 (0.091)	-0.007 (0.109)	0.020 (0.105)
Openness	-0.069 (0.091)	-0.067 (0.087)	-0.080 (0.087)	-0.083 (0.096)	-0.034 (0.102)	-0.010 (0.097)	-0.112 (0.084)	-0.022 (0.078)	-0.150 (0.097)	-0.057 (0.088)
P-value for F-test	0.102	0.456	0.031	0.164	0.808	0.055	0.019	0.016	0.152	0.231
Mean of Dependent Variable	2.00	2.04	1.84	1.73	1.64	2.15	2.22	2.07	1.86	2.08
Number of observations	255	255	254	246	249	250	248	248	240	246
R-squared	0.127	0.085	0.126	0.130	0.106	0.113	0.098	0.098	0.126	0.085

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. P-value for F-test is on the joint equality of the five sub-components. All regressions control for public service motivation, cognitive ability, grit, as well as barangay-level controls listed in the second panel of Table A2 in the SI.

Table A5: Public Service Motivation, Cognitive Ability, Grit, Big 5 Personality, and Community Leaders' Assessments of Police Effectiveness

	Acts on citizen feedback (1)	Takes citizen report seriously (2)	Responds timely (3)	Not corrupt (4)	Provides equal service (5)	I trust the police (6)	Provides satisfactory service (7)
Public Service Motivation	-0.035 (0.066)	0.010 (0.070)	-0.050 (0.101)	0.084 (0.090)	-0.137* (0.080)	-0.066 (0.050)	0.043 (0.069)
Cognitive Ability (Digit Span Score)	-0.034 (0.061)	-0.048 (0.056)	0.014 (0.074)	-0.143 (0.086)	-0.040 (0.059)	0.080* (0.047)	-0.047 (0.065)
Grit Scale	0.188*** (0.068)	0.068 (0.062)	0.108 (0.074)	-0.069 (0.081)	0.150** (0.065)	0.061 (0.048)	0.063 (0.057)
Big 5 Personality Index	-0.003 (0.071)	0.014 (0.072)	-0.043 (0.086)	-0.036 (0.079)	-0.056 (0.073)	-0.014 (0.052)	-0.040 (0.069)
P-value for F-test	0.027	0.359	0.552	0.323	0.035	0.214	0.662
Mean of Dependent Variable	1.39	1.49	1.27	3.23	1.28	1.52	1.33
Number of observations	235	236	231	211	234	236	235
R-squared	0.123	0.084	0.139	0.117	0.178	0.061	0.113

Notes: *** p<0.01, ** p<0.05, * p<0.1. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. P-value for F-test is on the joint equality of the four indices. All regressions control for barangay-level controls listed in the second panel of Table A2 in the SI as well as baseline values of the outcomes.

Table A6: Sub-components of Big 5 Personality Index, and Community Leaders' Assessments of Police Effectiveness

	Acts on citizen feedback (1)	Takes citizen report seriously (2)	Responds timely (3)	Not corrupt (4)	Provides equal service (5)	I trust the police (6)	Provides satisfactory service (7)
Extraversion	0.118* (0.064)	0.059 (0.059)	0.021 (0.096)	0.128 (0.104)	0.080 (0.088)	0.085 (0.063)	0.079 (0.070)
Agreeableness	-0.040 (0.071)	-0.134* (0.068)	-0.193** (0.088)	-0.048 (0.121)	-0.204** (0.081)	-0.088 (0.061)	-0.196*** (0.064)
Conscientiousness	0.002 (0.069)	0.085 (0.060)	0.135 (0.124)	-0.068 (0.131)	0.033 (0.084)	0.079 (0.068)	0.158** (0.075)
Neuroticism (reverse-coded)	-0.018 (0.051)	-0.010 (0.055)	0.001 (0.091)	-0.123 (0.097)	-0.008 (0.090)	-0.077 (0.060)	-0.017 (0.060)
Openness	-0.047 (0.069)	0.014 (0.058)	-0.026 (0.084)	0.077 (0.092)	0.030 (0.070)	-0.018 (0.051)	-0.085 (0.058)
P-value for F-test	0.481	0.069	0.288	0.424	0.113	0.122	0.027
Mean of Dependent Variable	1.39	1.49	1.27	3.23	1.28	1.52	1.33
Number of observations	235	236	231	211	234	236	235
R-squared	0.135	0.103	0.160	0.138	0.205	0.088	0.153

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. P-value for F-test is on the joint equality of the five sub-components. All regressions control for public service motivation, cognitive ability, grit, barangay-level controls listed in the second panel of Table A2 in the SI as well as baseline values of the outcomes.

A.8 Ethics and Permission

The study went through full review and was approved by the IRB at the [University name redacted], which at the time of the study implementation was the home institution of all three authors. In this section, we provide additional details on ethical considerations relating to this project. Parts of this ethics SI are reprinted from [redacted].

Partnering with the Sorsogon PNP on the One Sorsogon community policing initiative required careful consideration of several important ethical issues. By the time we approached the Sorsogon PNP about partnering on an evaluation of One Sorsogon, we had spent approximately one year conducting observational research on policing in the province. The surveys and scoping work we conducted during this period were crucial to our ability to evaluate the ethical risks of the study. We developed an extensive network of local academics, citizens, community leaders, and police officers before approaching the PNP leadership, which helped us to better understand the risks of the study and the ways we could mitigate those risks.

First, there were important ethical challenges that arose from working with the PNP in the midst of President Duterte’s War on Drugs. During the period from late 2016 through September 2021, the Drug War resulted in 12,000-30,000 deaths, including at least 6,200 at the hands of the police.⁴ We were wary of increasing contact between police officers and citizens due to the risk of police abuse. Our scoping work shed important light on how this risk manifested in Sorsogon. First, the PNP is a very decentralized organization, with provincial chiefs having a great amount of discretion over policing practices. The vast majority of Drug War violence occurred in major urban areas, especially Manila. Before approaching the PNP, we learned from our contacts in the area that the Sorsogon Provincial Police Chief was a well-known reformer who opposed the violent tactics of the Drug War. Rather than ramping up anti-drug operations, he implemented a number of programs aimed at showing the civilian population in Sorsogon the service-oriented side of policing.

A survey of citizens we conducted before approaching the PNP also suggested low rates of police abuse in Sorsogon: 99% of respondents had not heard of any instances of police abuse in their community in the last six months, and 95% of respondents said that the PNP’s methods for fighting drugs had not become more violent in their area since Duterte’s election. To reduce response bias to these potentially sensitive questions, respondents privately recorded their responses on an iPad that locked after responses were submitted. ACLED’s special project on the Philippines Drug War recorded only five drug-related deaths in Sorsogon Province between Duterte’s election and the initiation of our project, and none in the nine months preceding the intervention. Still, we were prepared to walk away from the

⁴“How many people have been killed in Rodrigo Duterte’s war on drugs?” *The Economist*, November 2021.

project in response to indications of police abuse. We employed field staff who attended each community policing event, so they could report any instances of coercion or abuse. We received no reports of concerning behavior.

An important piece of context is that One Sorsogon was a home-grown initiative of the Provincial Police Chief, who wished to de-emphasize the aggressive tactics of the Drug War and instead focus on non-drug related public safety issues. This does not mean that we, as researchers, absolve ourselves of the risks involved in implementing the program. We went through an extended process of due diligence to assess the risks of the intervention. That said, the homegrown nature of the program does reduce the risk that we as outsiders would introduce harms to the community by introducing a policy that was not locally appropriate. In addition, because the policy would have been implemented with or without our involvement, it was unlikely that we would introduce any additional harms that would not have already been experienced. If anything, the system we put in place to monitor abuses should reduce harms to citizens, in expectation.

The homegrown nature of the intervention, paired with the research design we implemented, also mitigated the risk of introducing additional “unfairness” to policing practices in Sorsogon. The POP intervention did not produce any meaningful changes to the experiences of citizens in control barangays (those that did not receive the POP intervention). Throughout the intervention period, the PNP retained its normal patrol schedules and assignments; the meetings with randomly-assigned officers were added on top of this service. POP meetings (and intervening barangay visits) were held during times when the officers leading the meetings were already scheduled to be present in the municipal office for administrative duties. Thus, communities in the control group experienced interactions with the same officers they would have experienced if the intervention did not take place. Under both the PNP’s ordinary procedures and our intervention, any civilian that engages with an officer may be “lucky” in encountering a high-quality officer, or “unlucky” in encountering a low-quality officer. Our intervention did not meaningfully change the expected type of officer that any given civilian would encounter, nor did it change the overall/average quality of officers in the province. In terms of considering fairness among the treatment units, the homegrown nature of the intervention means that, even in the absence of the research team’s involvement, some barangays would have been assigned PNP officers who were worse at implementing the intervention than others. After the intervention ended, the PNP resumed shuffling and reassigning officers to different locations according to their normal beat patrol assignment procedures. Consequently, no barangay was permanently hamstrung by their assignment during the intervention.

Given this context, we saw substantial ethical benefits stemming from the potential for catalyzing broader reform within the PNP, paired with conditions that allowed us to implement the intervention safely. Policing in the Philippines is highly decentralized; regional and provincial police chiefs have a great degree of autonomy over the tactics used by their units. As a result, the Sorsogon Police Chief’s community policing initiative was likely to have a large impact on day-to-day policing practices across the province. The chief hoped to overhaul the Sorsogon PNP’s approach to focus on community policing before his potential promotion to the regional office so that he could use it as a model for more widespread reform. When he learned of our interest to partner on an evaluation of One Sorsogon, he was adamant that, if the program was successful, a credible external evaluation could help sell this “softer” approach to policing to higher ups in the PNP. Indeed, the model of One Sorsogon helped spur a much larger region-wide community outreach initiative – See [redacted] for more details on this follow-up study.

Although we saw significant potential benefits to the research, the primary factor in our ethical calculus was whether we could participate in the research without putting subjects or research staff in harm’s way. During the project planning period, we held frequent meetings (both with and without the PNP leadership) to discuss how to mitigate risks associated with the intervention. One particularly important consideration was that the level of decentralization in the PNP could backfire. Despite the leadership-level buy-in with community policing practices, we were concerned that street level officers may not adopt a similar perspective. To guard against the risk that officers may commit abuses as a result of the intervention, we put in place an extensive monitoring system for our research team to observe potential abuses. Multiple staff members from our experienced local research team acted as “community observers” during all town halls conducted as part of the intervention. This allowed us to monitor the vast majority of police-citizen interactions that took place as part of the intervention. A member of the research team was also present at every POP meeting. Finally, we designed the intervention so that LGU officials took the lead in implementing the public safety initiatives decided on during POP in their own communities, with the PNP playing a supporting role. We were prepared to immediately end our involvement in the project if we learned that the intervention created opportunities for individual PNP officers to abuse or intimidate citizens. No instances of abuse were reported.

A broader concern is whether the goal of improving trust and cooperation with the PNP as an institution was actually a good thing during a time when the institution was the face of abusive human rights violations. We wrestled significantly with this concern, but in the end several factors led us to proceed. First, the majority of citizens in Sorsogon seem to recognize the degree of decentralization in the PNP and the vastly different approaches

to policing in major urban areas like Manila (where the Drug War was primarily taking place) and rural provinces like Sorsogon. In other words, citizens can generally separate between the PNP “institution” at these two levels. Second, we devoted significant attention to mitigating the risk of the Sorsogon PNP capitalizing on increased citizen trust to enable abusive practices over the long term. Based on discussions with key informants, we came to believe that One Sorsogon would empower the community-focused municipal Police Community Relations (PCR) officers to remain influential, even if a changeover in provincial police leadership occurred. This proved correct when the provincial chief was promoted to the regional office early in the POP intervention. Although his successor wanted to implement his own initiatives, the momentum of One Sorsogon convinced him to continue with a community-focused approach. In terms of our own commitment as researchers, we viewed our involvement in One Sorsogon to be the beginning of longer term efforts to help implement “best practices” of policing across the province and the region. Each of us is still involved in ongoing research on policing in the region and at no time did we consider this to be a one-off project.

The participation of local researchers and stakeholders proved to be a key factor in our ability to accurately assess ethical risks and benefits. As we mentioned in the manuscript and in the preceding paragraphs, we relied on an extensive network of local stakeholders to brainstorm and assess the situations that might arise as a result of the intervention. One of the study authors was born and raised in the region, as was the full-time field research manager. The field research manager has a long-running relationship with the PIs that allows her to freely express ethical or other concerns about things she observed in the field. These researchers’ extensive local knowledge and experience proved critical in our ability to make these determinations and carry out the research in a safe, ethical manner.

We were diligent in following all laws and regulations governing this research. Our local research team and the Filipino PI are highly experienced in conducting survey research and experiments in Bicol region within the confines of the law. In addition, working with government agencies required a strict adherence to the law on their side as well.

In order to build the strongest ethical foundation that we could for the study, we did trainings for everyone involved in the administration of the data collection and intervention. At the start of the program, we did a training for the enumerators that emphasized ethics and safety considerations. We also did a major training for the PNP PCR officers and DSWD reps that emphasized ethical treatment and protection of human rights. This training required mobilizing dozens of police officers and DSWD representatives from 40 municipalities to two training sites. We also worked with the PNP and DSWD regional leadership to instill that safety and ethical conduct was critical to making Usap Tayo a success.

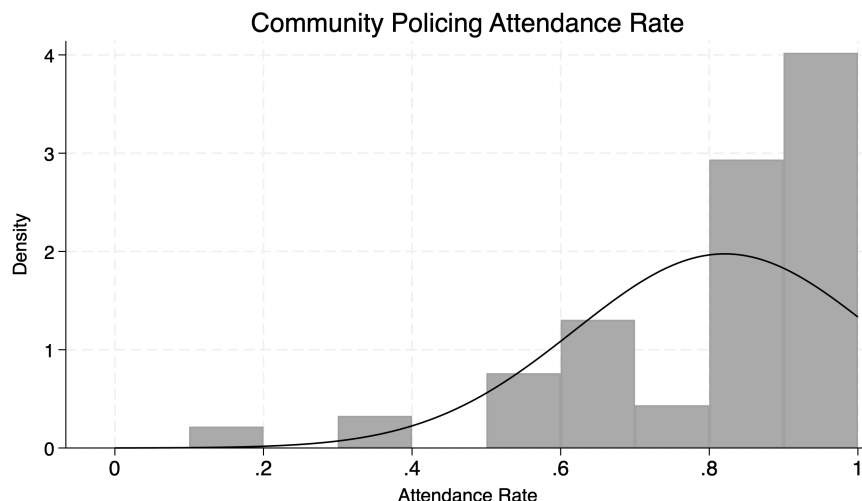
Informed Consent from Community Leaders All of the community leaders in our study provided their consent to participate by signing a form that they wanted to participate. We informed community leaders that they were participating in a research study and that their community was randomly selected for inclusion. There was no deception involved in community leaders’ participation in the study. The baseline survey was self-enumerated on tablets, with community leaders themselves responding to survey questions (or choosing to skip questions) on their own. Because we recognized the possibility that our context was one where the “risks of harm change during a study,” at each POP meeting we gave community leaders the opportunity to opt out of future meetings. No community leaders were coerced into participation in the program.

Informed Consent from Police Officers We gave police officers who participated in our survey or the POP meetings a consent form similar to the one provided to community leaders. Like with community leaders, we gave officers the option to opt-out of the survey at any time. However, participation in the POP intervention by police was part of their regular duties and thus subject to assignment from their supervisors. Thus, officials could be obliged by their supervisors to attend POP meetings or reassigned at will. That said, we did provide opportunities for the police officers to report on their experience with the POP meetings, specifically to learn if they perceived any safety hazards, which we could then bring to the senior leadership.

Complete confidentiality could not be maintained, as subjects necessarily interacted with and evaluated one another as a key component of the research. However, we maintained confidentiality and anonymity in all other aspects of the research by ensuring data security through tablet-based self-enumeration that minimized access to responses even beyond standard in-person survey procedures.

A.9 Treatment Compliance

Figure A.1: Compliance: Attendance Rate



The above figure displays the distribution of officer attendance at the POP meetings to which they were assigned. Just under 50% of officers exhibited perfect attendance to the POP meetings. Just over 30% of officers attended less than three-quarters of the meetings to which they were assigned.

A.10 Mechanism Test: Attendance vs. Other Behaviors

Two causal pathways could drive the observed relationship between officer traits and citizen assessments. The first possibility is that officer traits affected whether they *attended* the POP meetings with community leaders. Attendance is a common measure of objective bureaucratic performance (e.g., [Callen et al., 2015](#)) and an easily observed action that would likely affect community leaders' assessments. A second possibility is that traits affected how officers behaved *during* the meetings. For example, certain officers may have worked more effectively to identify and implement solutions to the public safety issues raised by citizens, or have done a better job making citizens "feel heard." We assume that if the traits we measured had an effect on citizen assessments but did not have an effect on attendance, this bundle of within-meeting behaviors is the mechanism driving the results.

To test this potential mechanism, we regress officers' POP attendance rate on our measures of traits and report the results in Table [A7](#). We find a null effect of all measures

of traits on attendance rate, suggesting that citizens' positive assessments of "good" officers were likely driven by the actions taken by officers during the meetings. This finding accords with our qualitative observation that public-minded, extraverted officers were better able to work with community leaders to devise actual solutions, rather than just show up and go through the motions. The moderating effect of attendance might be higher in contexts where there is weaker motivation or monitoring capacity on the part of police leadership.

Table A7: Public Service Motivation, Cognitive Ability, Grit, Big 5 Personality and Police Officer Attendance

	Attendance (1)
Public Service Motivation	0.002 (0.027)
Cognitive Ability (Digit Span Score)	-0.023 (0.019)
Grit Scale	0.003 (0.032)
Big 5 Personality Index	-0.007 (0.030)
Mean of Dependent Variable	0.820
Observations	92
Adjusted R-squared	0.027

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. All regressions control for police officer attributes listed in the third panel of Table A1 in the SI.

A.11 Supplementary Tables

Table A8: Public Service Motivation, Cognitive Ability, Grit and Community Leaders' Assessments of Individual Officers (No Covariates)

	Effort (1)	Reliability (2)	Responsiveness (3)	Experience (4)	Creativity (5)	Trustworthiness (6)	Approachability (7)	Confidence (8)	Empathy (9)	Overall Quality (10)
Public Service Motivation	0.152** (0.069)	0.199** (0.080)	0.145* (0.078)	0.253** (0.096)	0.213** (0.096)	0.233** (0.092)	0.158** (0.077)	0.172** (0.070)	0.170* (0.093)	0.194*** (0.065)
Cognitive Ability (Digit Span Score)	-0.114 (0.069)	-0.073 (0.066)	-0.179** (0.080)	-0.058 (0.082)	-0.113 (0.080)	-0.100 (0.082)	-0.055 (0.080)	-0.167** (0.067)	-0.194*** (0.065)	-0.091 (0.062)
Grit Scale	0.121* (0.064)	0.031 (0.064)	-0.112 (0.070)	-0.142 (0.103)	-0.047 (0.083)	-0.143 (0.097)	-0.094 (0.072)	-0.050 (0.064)	0.076 (0.076)	-0.031 (0.065)
Big 5 Personality Index	-0.103 (0.066)	-0.109 (0.072)	0.039 (0.089)	-0.029 (0.113)	0.029 (0.096)	-0.058 (0.077)	-0.076 (0.070)	-0.073 (0.073)	-0.127 (0.086)	-0.034 (0.079)
Mean of Dependent Variable	2.00	2.04	1.84	1.73	1.64	2.15	2.22	2.07	1.86	2.08
Number of observations	257	257	256	248	251	252	250	250	242	248
R-squared	0.036	0.031	0.037	0.030	0.034	0.041	0.023	0.037	0.038	0.030

Notes: *** p<0.01, ** p<0.05, * p<0.1. Robust (Huber/White) standard errors clustered at the officer-level in parentheses.

Table A9: Public Service Motivation, Cognitive Ability, Grit and Community Leaders' Assessments of Individual Officers (Full Set of Controls)

	Effort (1)	Reliability (2)	Responsiveness (3)	Experience (4)	Creativity (5)	Trustworthiness (6)	Approachability (7)	Confidence (8)	Empathy (9)	Overall Quality (10)
Public Service Motivation	0.117* (0.070)	0.178** (0.086)	0.008 (0.084)	0.203* (0.112)	0.134 (0.099)	0.189** (0.091)	0.143* (0.075)	0.177** (0.076)	0.092 (0.106)	0.113 (0.075)
Cognitive Ability (Digit Span Score)	-0.123* (0.064)	-0.083 (0.068)	-0.217*** (0.066)	-0.174** (0.084)	-0.123 (0.081)	-0.110 (0.075)	-0.087 (0.068)	-0.183*** (0.059)	-0.201*** (0.068)	-0.078 (0.056)
Grit Scale	0.239*** (0.068)	0.083 (0.073)	-0.019 (0.084)	-0.078 (0.105)	-0.004 (0.093)	-0.124 (0.115)	-0.038 (0.073)	0.017 (0.070)	0.178* (0.098)	0.027 (0.081)
Big 5 Personality Index	-0.091 (0.082)	-0.127 (0.088)	0.053 (0.108)	-0.056 (0.114)	0.016 (0.107)	-0.053 (0.084)	-0.044 (0.077)	-0.092 (0.085)	-0.168 (0.102)	-0.032 (0.094)
Officer-level Controls										
Female = 1	-0.264 (0.259)	-0.145 (0.272)	-0.091 (0.285)	0.149 (0.298)	-0.366 (0.276)	-0.134 (0.263)	-0.055 (0.239)	-0.028 (0.255)	0.020 (0.260)	-0.277 (0.242)
Age (in years)	-0.012 (0.026)	-0.028 (0.022)	-0.009 (0.025)	-0.005 (0.026)	-0.016 (0.021)	-0.002 (0.027)	-0.014 (0.022)	0.011 (0.025)	-0.006 (0.021)	-0.032 (0.022)
Years in Service	0.006 (0.022)	-0.011 (0.019)	0.015 (0.020)	0.007 (0.024)	0.003 (0.019)	-0.006 (0.025)	0.014 (0.021)	0.001 (0.022)	-0.005 (0.019)	-0.008 (0.019)
Officer Rank	0.002 (0.078)	0.127* (0.072)	-0.167** (0.084)	-0.021 (0.103)	-0.020 (0.087)	0.023 (0.086)	0.026 (0.079)	-0.065 (0.080)	-0.016 (0.129)	0.116 (0.079)
Less than College	0.856*** (0.236)	0.533 (0.476)	1.073** (0.410)	0.974** (0.402)	1.241*** (0.307)	0.407 (0.301)	0.448 (0.320)	0.726** (0.301)	0.378 (0.384)	0.814*** (0.240)
Completed Post-College	0.116 (0.185)	-0.030 (0.177)	0.184 (0.248)	-0.264 (0.252)	-0.148 (0.180)	-0.206 (0.237)	-0.084 (0.221)	0.074 (0.215)	-0.002 (0.214)	-0.122 (0.228)
Community-leader-level Controls										
Barangay Kapitan = 1	-0.035 (0.229)	-0.229 (0.210)	-0.078 (0.264)	0.079 (0.251)	-0.130 (0.246)	0.106 (0.225)	-0.294 (0.194)	-0.047 (0.236)	0.101 (0.289)	-0.118 (0.220)
Barangay Kagawad = 1	-0.168 (0.175)	-0.212 (0.147)	-0.019 (0.190)	-0.161 (0.220)	-0.278 (0.224)	-0.005 (0.166)	-0.045 (0.139)	0.077 (0.173)	0.014 (0.255)	-0.123 (0.151)
Age (in years)	-0.004 (0.010)	-0.002 (0.009)	-0.007 (0.011)	-0.011 (0.012)	-0.004 (0.010)	-0.010 (0.011)	-0.004 (0.009)	0.006 (0.009)	0.010 (0.012)	0.001 (0.010)
Educational Attainment	-0.022 (0.070)	-0.000 (0.066)	0.013 (0.068)	-0.083 (0.081)	-0.033 (0.077)	-0.064 (0.069)	0.034 (0.062)	-0.002 (0.058)	0.046 (0.081)	0.009 (0.073)
Employment Status	0.087* (0.045)	0.117** (0.047)	0.099 (0.065)	-0.024 (0.079)	0.129* (0.066)	0.107** (0.051)	0.086* (0.045)	0.032 (0.057)	0.056 (0.066)	0.110*** (0.040)
Monthly Income (pesos)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Years in Residence	0.004 (0.006)	0.006 (0.006)	0.007 (0.007)	0.010 (0.008)	0.007 (0.006)	0.006 (0.006)	0.010* (0.005)	0.007 (0.006)	-0.000 (0.006)	0.006 (0.005)
Male = 1	0.332 (0.283)	0.231 (0.250)	0.215 (0.260)	0.141 (0.355)	0.275 (0.291)	-0.087 (0.254)	-0.104 (0.243)	0.201 (0.249)	0.034 (0.279)	0.191 (0.283)
Assets	-0.007 (0.007)	-0.004 (0.009)	-0.012*** (0.004)	-0.009** (0.004)	-0.017*** (0.004)	-0.006 (0.006)	-0.016** (0.008)	-0.008 (0.006)	-0.008 (0.005)	-0.007 (0.006)
Years in Service	0.016 (0.013)	0.019 (0.012)	0.017 (0.012)	0.005 (0.015)	-0.001 (0.018)	0.022* (0.013)	0.018 (0.013)	0.003 (0.014)	0.002 (0.016)	0.013 (0.012)

	Effort (1)	Reliability (2)	Responsiveness (3)	Experience (4)	Creativity (5)	Trustworthiness (6)	Approachability (7)	Confidence (8)	Empathy (9)	Overall Quality (10)
Continued from previous page										
	Barangay-level controls									
Population	0.000* (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000** (0.000)	-0.000 (0.000)
Share of Male Residents	0.642 (5.198)	-1.451 (5.071)	-8.094 (6.069)	0.928 (7.881)	-5.242 (6.712)	-10.770 (6.650)	-5.475 (5.191)	-1.379 (4.540)	-5.806 (5.639)	-5.290 (5.202)
Average Household Size	0.064 (0.208)	0.118 (0.212)	0.090 (0.242)	-0.053 (0.310)	-0.246 (0.257)	0.177 (0.235)	0.074 (0.206)	0.278 (0.217)	0.110 (0.251)	0.137 (0.225)
Share of OFW	-1.064 (6.023)	-7.846 (6.568)	4.725 (10.470)	-1.378 (8.613)	-5.664 (6.983)	-3.373 (6.984)	-4.011 (5.639)	-6.727 (5.866)	-11.057* (6.550)	3.511 (7.340)
Average Education	0.996** (0.442)	0.531 (0.438)	0.239 (0.595)	1.016 (0.642)	-0.023 (0.535)	0.567 (0.514)	0.652 (0.449)	0.797* (0.437)	-0.035 (0.595)	0.367 (0.468)
Share of Age 18-39	-1.053 (1.915)	-1.369 (1.836)	0.723 (2.442)	-1.750 (2.273)	-1.274 (2.347)	2.221 (2.170)	2.065 (1.836)	-0.569 (1.878)	-0.822 (1.840)	3.080 (2.129)
Share of Unmarried Residents	-3.046 (3.213)	-0.097 (3.360)	-7.393** (3.381)	-7.542* (4.428)	0.584 (4.028)	-0.883 (3.817)	-0.802 (3.457)	-3.552 (3.440)	-1.601 (4.193)	0.992 (3.111)
Share of Catholic Residents	-0.252 (1.906)	-1.655 (1.717)	0.085 (2.326)	1.135 (2.886)	-6.272*** (2.033)	1.657 (2.222)	1.129 (1.854)	0.104 (2.075)	-2.051 (2.183)	-0.018 (2.344)
Share of Indigenous Population	12.348* (6.477)	6.560 (7.655)	6.826 (7.097)	9.142 (8.500)	-4.207 (6.873)	12.315* (6.986)	14.218** (6.394)	5.302 (5.177)	-2.708 (5.890)	10.564* (5.400)
Share of Home Goods	-0.777 (5.235)	2.335 (5.367)	-11.130* (5.964)	-7.066 (7.744)	-2.623 (7.171)	3.107 (7.030)	3.189 (5.996)	0.174 (6.280)	-1.320 (6.363)	4.441 (5.061)
Rebel Presence Rating in 2015	-0.063 (0.145)	-0.046 (0.153)	0.197 (0.159)	0.132 (0.223)	-0.135 (0.158)	0.143 (0.194)	0.119 (0.156)	0.026 (0.169)	0.037 (0.175)	0.014 (0.150)
Baseline Crime Rate	-0.010 (0.010)	-0.010 (0.011)	-0.006 (0.009)	-0.004 (0.010)	-0.007 (0.012)	-0.011 (0.010)	-0.014 (0.009)	-0.011 (0.008)	-0.007 (0.012)	-0.016* (0.009)
Average Distance From a Police Station (km)	0.017 (0.025)	0.020 (0.024)	-0.011 (0.032)	-0.047 (0.034)	0.029 (0.027)	0.060** (0.027)	0.028 (0.022)	0.047* (0.026)	-0.008 (0.030)	0.046* (0.026)
	Junior officer indexes of traits									
Public Service Motivation	0.091 (0.081)	-0.024 (0.086)	0.040 (0.108)	-0.035 (0.107)	-0.187** (0.094)	-0.072 (0.095)	0.031 (0.076)	-0.067 (0.077)	-0.055 (0.084)	-0.005 (0.082)
Cognitive Ability (Digit Span Score)	0.251*** (0.071)	0.163** (0.072)	0.149** (0.074)	0.192* (0.106)	0.237*** (0.077)	0.130 (0.090)	0.134** (0.064)	0.140* (0.073)	0.230** (0.088)	0.174** (0.072)
Grit Scale	-0.025 (0.091)	-0.014 (0.089)	-0.194 (0.122)	-0.204 (0.139)	-0.131 (0.119)	-0.039 (0.109)	0.015 (0.101)	-0.102 (0.097)	-0.144 (0.120)	0.004 (0.100)
Big 5 Personality Index	-0.235** (0.110)	-0.087 (0.101)	-0.068 (0.115)	-0.051 (0.147)	-0.074 (0.120)	-0.030 (0.115)	-0.078 (0.104)	0.032 (0.104)	-0.037 (0.102)	-0.120 (0.102)
Mean of Dependent Variable	2.00	2.04	1.84	1.73	1.64	2.15	2.22	2.07	1.86	2.08
Number of observations	234	234	233	225	228	229	227	227	219	225
R-squared	0.213	0.181	0.164	0.191	0.242	0.166	0.181	0.149	0.159	0.191

Notes: *** p<0.01, ** p<0.05, * p<0.1. Robust (Huber/White) standard errors clustered at the officer-level in parentheses.

Table A10: Public Service Motivation, Cognitive Ability, Grit, and Community Leaders' Assessments of Police Effectiveness (No Covariates)

	Acts on citizen feedback (1)	Takes citizen report seriously (2)	Responds timely (3)	Not corrupt (4)	Provides equal service (5)	I trust the police (6)	Provides satisfactory service (7)
Public Service Motivation	-0.035 (0.059)	0.013 (0.060)	-0.049 (0.088)	0.062 (0.086)	-0.135* (0.078)	-0.065 (0.050)	0.056 (0.064)
Cognitive Ability (Digit Span Score)	0.013 (0.072)	-0.027 (0.062)	0.006 (0.076)	-0.110 (0.103)	-0.045 (0.066)	0.059 (0.037)	-0.041 (0.066)
Grit Scale	0.158** (0.064)	0.058 (0.055)	0.054 (0.070)	-0.029 (0.074)	0.115* (0.069)	0.047 (0.047)	0.066 (0.053)
Big 5 Personality Index	-0.008 (0.066)	0.006 (0.067)	-0.005 (0.080)	-0.073 (0.080)	-0.007 (0.067)	0.004 (0.051)	-0.045 (0.065)
Mean of Dependent Variable	1.39	1.49	1.27	3.23	1.28	1.52	1.33
Number of observations	236	237	232	212	235	237	236
R-squared	0.039	0.026	0.075	0.042	0.096	0.028	0.033

Notes: *** p<0.01, ** p<0.05, * p<0.1. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. All regressions control for baseline values of the outcomes.

Table A11: Public Service Motivation, Cognitive Ability, Grit, and Community Leaders' Assessments of Police Effectiveness

	Acts on citizen feedback (1)	Takes citizen report seriously (2)	Responds timely (3)	Not corrupt (4)	Provides equal service (5)	I trust the police (6)	Provides satisfactory service (7)
Public Service Motivation	-0.060 (0.062)	0.015 (0.067)	-0.087 (0.104)	0.034 (0.108)	-0.156* (0.088)	-0.061 (0.059)	0.006 (0.068)
Cognitive Ability (Digit Span Score)	-0.021 (0.060)	-0.054 (0.059)	0.009 (0.073)	-0.155 (0.105)	-0.069 (0.060)	0.096** (0.047)	0.001 (0.062)
Grit Scale	0.191*** (0.063)	0.046 (0.057)	0.092 (0.079)	-0.122 (0.102)	0.216*** (0.078)	0.080 (0.056)	0.062 (0.062)
Big 5 Personality Index	0.052 (0.063)	0.049 (0.064)	0.007 (0.090)	0.051 (0.102)	-0.101 (0.078)	-0.021 (0.061)	0.036 (0.073)
Officer-level Controls							
Female = 1	-0.100 (0.180)	0.103 (0.141)	-0.154 (0.248)	0.076 (0.292)	0.205 (0.246)	0.068 (0.200)	0.183 (0.212)
Age (in years)	0.004 (0.013)	0.009 (0.011)	0.000 (0.021)	-0.002 (0.022)	0.005 (0.014)	0.008 (0.014)	0.014 (0.015)
Years in Service	-0.018 (0.012)	-0.031*** (0.011)	-0.008 (0.018)	-0.003 (0.022)	-0.022 (0.016)	-0.014 (0.013)	-0.013 (0.014)
Officer Rank	-0.018 (0.073)	0.021 (0.062)	-0.030 (0.091)	-0.002 (0.116)	-0.006 (0.074)	0.032 (0.057)	-0.037 (0.069)
Less than College	0.401 (0.277)	0.482** (0.200)	0.368 (0.459)	-0.221 (0.689)	0.955*** (0.309)	0.524** (0.205)	0.484 (0.319)
Completed Post-College	0.078 (0.123)	-0.194* (0.111)	0.015 (0.153)	0.036 (0.185)	0.341* (0.190)	0.001 (0.137)	-0.062 (0.159)
Community-leader-level Controls							
Barangay Kapitan = 1	0.043 (0.172)	-0.074 (0.155)	-0.130 (0.186)	0.313 (0.201)	0.016 (0.158)	-0.027 (0.150)	0.006 (0.167)
Barangay Kagawad = 1	0.099 (0.131)	0.056 (0.116)	-0.168 (0.161)	0.190 (0.195)	0.082 (0.146)	-0.036 (0.126)	-0.205 (0.140)
Age (in years)	0.014* (0.008)	0.010 (0.007)	0.008 (0.007)	0.028*** (0.010)	-0.003 (0.007)	0.008 (0.006)	0.008 (0.007)
Educational Attainment	0.030 (0.063)	0.054 (0.055)	-0.057 (0.063)	0.056 (0.060)	-0.022 (0.058)	-0.009 (0.050)	0.010 (0.052)
Employment Status	-0.054 (0.036)	-0.041 (0.033)	-0.021 (0.050)	0.058 (0.050)	-0.024 (0.046)	-0.052 (0.036)	0.014 (0.038)
Monthly Income (pesos)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Years in Residence	-0.004 (0.004)	-0.001 (0.004)	0.000 (0.004)	-0.009 (0.007)	0.002 (0.004)	-0.002 (0.004)	-0.001 (0.004)
Male = 1	0.089 (0.213)	0.079 (0.171)	-0.109 (0.239)	0.028 (0.297)	-0.148 (0.236)	0.070 (0.193)	0.324 (0.220)
Assets	-0.001 (0.006)	-0.002 (0.007)	0.007 (0.005)	0.009 (0.006)	0.004 (0.005)	0.001 (0.003)	0.008 (0.006)
Years in Service	-0.003 (0.012)	0.000 (0.009)	-0.021* (0.013)	-0.016 (0.013)	-0.009 (0.012)	0.000 (0.009)	-0.001 (0.011)

	Acts on citizen feedback (1)	Takes citizen report seriously (2)	Responds timely (3)	Not corrupt (4)	Provides equal service (5)	I trust the police (6)	Provides satisfactory service (7)
Continued from previous page							
Barangay-level controls							
Population	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Share of Male Residents	6.374 (3.947)	7.227** (3.428)	3.517 (5.184)	8.100 (6.502)	-7.694 (5.534)	-2.318 (4.068)	3.604 (4.333)
Average Household Size	0.006 (0.184)	0.134 (0.172)	0.194 (0.242)	0.404 (0.335)	0.205 (0.229)	0.097 (0.178)	-0.162 (0.194)
Share of OFW	8.798* (4.654)	1.922 (4.429)	6.930 (6.558)	-1.513 (8.059)	6.349 (5.270)	-1.794 (4.836)	-0.101 (6.852)
Average Education	0.191 (0.349)	0.157 (0.352)	-0.562 (0.576)	0.503 (0.712)	-0.589 (0.479)	-0.083 (0.431)	-0.511 (0.439)
Share of Age 18-39	1.080 (1.415)	1.089 (1.260)	-0.612 (1.972)	-5.874*** (2.183)	1.155 (1.938)	2.374* (1.317)	-0.688 (1.656)
Share of Unmarried Residents	0.088 (2.328)	0.375 (2.123)	-2.968 (3.101)	-10.195*** (3.842)	-1.751 (2.843)	-0.639 (2.332)	-0.027 (2.230)
Share of Catholic Residents	1.059 (1.649)	2.520* (1.295)	1.194 (1.995)	3.524 (2.707)	3.302 (2.087)	1.604 (1.392)	0.740 (1.565)
Share of Indigenous Population	-2.334 (5.729)	-3.106 (3.666)	-2.505 (7.886)	-0.426 (7.182)	2.561 (6.532)	0.506 (4.503)	6.217 (5.284)
Share of Home Goods	0.665 (4.875)	0.249 (4.344)	-4.735 (5.433)	-10.407 (8.995)	-6.215 (5.254)	-0.440 (4.323)	-4.289 (4.958)
Rebel Presence Rating in 2015	-0.054 (0.111)	-0.133 (0.111)	-0.017 (0.165)	0.163 (0.196)	0.047 (0.133)	-0.082 (0.120)	0.096 (0.127)
Baseline Crime Rate	0.007 (0.006)	0.004 (0.005)	0.012* (0.007)	0.004 (0.011)	0.006 (0.006)	-0.003 (0.005)	0.011** (0.005)
Average Distance From a Police Station (km)	-0.043** (0.020)	-0.041** (0.019)	-0.053* (0.029)	-0.005 (0.038)	-0.029 (0.023)	-0.007 (0.016)	-0.031 (0.022)
Junior officer indexes of traits							
Public Service Motivation	0.114* (0.067)	0.013 (0.064)	-0.007 (0.095)	0.060 (0.099)	0.111 (0.084)	-0.000 (0.053)	0.138* (0.078)
Cognitive Ability (Digit Span Score)	-0.005 (0.065)	0.026 (0.046)	0.020 (0.075)	0.085 (0.104)	0.058 (0.075)	0.051 (0.045)	0.069 (0.054)
Grit Scale	0.177*** (0.059)	0.149** (0.064)	0.138 (0.083)	0.072 (0.111)	-0.000 (0.084)	0.013 (0.075)	0.083 (0.068)
Big 5 Personality Index	-0.193*** (0.066)	-0.112 (0.070)	-0.115 (0.091)	-0.125 (0.130)	0.007 (0.097)	0.015 (0.070)	-0.167** (0.082)
Mean of Dependent Variable	1.39	1.49	1.27	3.23	1.28	1.52	1.33
Number of observations	214	215	210	190	213	215	214
R-squared	0.214	0.194	0.193	0.233	0.239	0.111	0.167

Notes: *** p<0.01, ** p<0.05, * p<0.1. Robust (Huber/White) standard errors clustered at the officer-level in parentheses. All regressions control for baseline values of the outcomes.

Table A12: Balance Tests: Attriters vs. Non-Attriters

	Attriters	Non-Attriters	Difference in Means	P-value
Barangay Kapitan = 1	0.347	0.262	0.085	0.2816
Barangay Kagawad = 1	0.273	0.500	-0.227	0.0031
Barangay Tanod = 1	0.380	0.238	0.142	0.0770
Age (in years)	52.34	50.93	1.41	0.3892
Educational Attainment	1.850	2.120	-0.268	0.2510
Employment Status	1.934	1.929	0.005	0.9811
Monthly Income (Pesos)	12,627	14,283	-1,656	0.6576
Years in Residence	45.27	44.57	0.70	0.7745
Male = 1	0.90	0.90	0.00	0.8917
Assets	4.31	3.74	0.57	0.6996
Years in Service	7.45	4.02	3.42	0.0002
Number of observations	42	242		

Table A13: Correlation Matrix for Officer-level traits and observable attributes

	PSM Index	Digit Span Score	Grit	Big 5 Index	Female	Age	Years in Service	Officer Rank	Less than College	Completed College	Completed Post-College
PSM Index	1.0000										
Digit Span Score	0.1700	1.0000									
Grit	0.4026	0.0967	1.0000								
Big 5 Index	0.5585	0.0820	0.5480	1.0000							
Female	0.1446	0.2100	0.1511	0.1202	1.0000						
Age	-0.2304	-0.1459	-0.1173	-0.1877	-0.3648	1.0000					
Years in Service	-0.2379	-0.1369	-0.1571	-0.1699	-0.0880	0.7571	1.0000				
Officer Rank	-0.1264	-0.1242	-0.0646	-0.0142	-0.2048	0.7245	0.6917	1.0000			
Less than College	0.0439	-0.0001	-0.0385	0.0073	-0.0465	0.1984	0.2179	0.1917	1.0000		
Completed College	-0.0602	-0.0232	-0.1357	-0.0561	0.0027	-0.0279	-0.0162	0.0341	-0.2895	1.0000	
Completed Post-College	0.0474	0.0242	0.1551	0.0559	0.0135	-0.0407	-0.0597	-0.1030	-0.0497	-0.9416	1.0000

Notes: The table demonstrates strong positive correlations among the four traits. For example, the Big 5 personality measure is strongly correlated with the Public Service Motivation (PSM) Index (0.56) and Grit (0.55). Our empirical strategy assumes that, by controlling for other traits, we are able to identify “all else equal” effects of a particular trait on outcomes of interest.

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