Purdue University
Purdue e-Pubs

GPRI Digital Library | Global Policy Research Institute

6-26-2012

First Steps Towards Hearts and Minds? USAID's Countering Violent Extremism Policies in Africa

Daniel P. Aldrich
Purdue University, daniel.aldrich@gmail.com

Follow this and additional works at: http://docs.lib.purdue.edu/gpridocs

Part of the Political Science Commons

Aldrich, Daniel P., "First Steps Towards Hearts and Minds? USAID's Countering Violent Extremism Policies in Africa" (2012). *GPRI Digital Library.* Paper 8.
http://docs.lib.purdue.edu/gpridocs/8

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.

First Steps Towards Hearts and Minds?
USAID's Countering Violent Extremism Policies in Africa

26 June 2012

Daniel P. Aldrich[1]

Abstract: The United States government has adopted new approaches to counter violent extremist organizations around the world. "Soft security" and development programs include focused educational training for groups vulnerable to terrorist recruitment, norm messaging through local radio programming, and job creation in rural communities. This article evaluates the effectiveness of one set of these multi-vectored, community-level programs through analysis of data from 200 respondents in two similar, neighboring cities in northern Mali, Africa. The data show that residents in Timbuktu who were exposed to the programming for up to five years displayed measurably altered civic behavior and listening patterns in comparison with their counterparts in the control city of Dire which had no programming (controlling for potential covariates including age, ethnicity, and political and socioeconomic conditions). However, there was little measurable difference between the groups in terms of their cultural identities and attitudes towards the West. This article suggests that the process of "winning hearts and minds" can be effective at certain levels but may require extended time and dedicated resources to have higher-level results.

Introduction

Since the 9/11 terrorist attacks on the United States, decision makers in the U.S. government have stepped up their efforts to decrease the threats from violent extremist organizations (VEOs) such as Abu Sayyaf, Al Qaeda and its regional allies and affiliates (including al Qaeda in the Islamic Maghreb, al Qaeda in the Arabian Peninsula, and al Shabab), Hamas, and Lashkar-e-Taiba. Much of the funding for countering violent extremism has gone toward "kinetic" operations such as covert or battlefield operations, drone strikes, and the training of US-allied military forces in host nations. Of the funds set aside for fighting the "war on terror" between fiscal year (FY) 2001 and FY 2012, only five percent has gone towards diplomacy and development programs of the State Department and United States Agency for

[1] Daniel P. Aldrich is associate professor of public policy at Purdue University, an American Association for the Advancement of Science (AAAS) fellow at USAID during the 2011-2012 academic year, and a Fulbright research fellow at the University of Tokyo during the 2012-2013 year. He can be reached at daniel.aldrich@gmail.com.

International Development (USAID).[1] Planners may rely on military responses because they remain familiar and allow quickly measurable outcomes.

Nevertheless, many are beginning to recognize that they cannot, as Chairman of the Joint Chiefs of Staff Admiral Mike Mullen publicly acknowledged, "kill our way to victory."[2] For example, while drone strikes may reduce the risks to US military personnel on the ground and remove VEO leaders from the battlefield, they simultaneously reinforce grievance narratives of such organizations and the "collateral damage" angers local populations and host governments alike.[3] This was the case in Somalia in the mid-2000s and remains an issue in Yemen and Pakistan.[4]

Recently, the U.S. government has taken on broader strategy based on a diplomacy, development, and defense platform that seeks to incorporate a soft-side approach in the fight against violent extremism.[5] As one decision maker argued, "[t]he way to undermine violent extremism is to give potential recruits…a viable alternative for which to live, not die."[6] Strategies from the softer side include addressing alienation among marginalized groups, improving civil-military relations, and improving educational and vocational opportunities.[7] Observers may recognize this countering violent extremism (CVE) approach as an offshoot of the "soft power" approach advocated by the former Assistant Secretary of Defense Joe Nye which promoted co-optation rather than coercion as a lever for changing behaviors.[8]

Where hard power relies on military strength and deterrence, soft power rests on credibility, trust, and shared norms. Recognizing the multiple factors which can radicalize individuals and either push or pull them to join violent extremist organizations,[9] the soft approach to counter-terrorism seeks to decrease the likelihood of recruitment and dry up the labor pool for potential terrorists.[10] It does so through, among other methods, job provision,

vocational training, and information diffusion techniques. Employment growth may embed local residents into local networks and institutions and inoculate them against incentives from insurgent groups. Stronger civic engagement ties locals into legitimate local governments and encourages them to support efforts to keep out violent extremist groups. Similarly, radio programs on peace and tolerance can reduce intergroup tension and make violence less likely. USAID and the State Department began these new strategies in the early 2000s with a special focus on developing African nations with wide, ungoverned spaces and a large Muslim population.[11]

U.S. planners show special interest in Africa because of its burgeoning youth population, persistent lack of educational, housing and vocational opportunities, long-simmering grievances among marginalized populations, and location on heavily-trafficked routes.[12] Chad, Niger, Mauritania, Mali, Senegal, Nigeria, Morocco, Tunisia, and Algeria serve as the main locations for the ongoing "battle of ideas"[13] between VEO recruiters on one side local moderates, national governments, and United States partners on the other.[14] Chief among the programs of the State Department and USAID has been the Pan Sahel Initiative (created in 2002) which became the Trans-Sahara Counter-Terrorism Partnership (TSCTP, created in 2005); the Peace through Development (PDEV, started in 2008 and now operating as PDEV II) program has emerged from TSCTP. Alongside these programs USAID has run a number of smaller-scale programs for countering violent extremism.

In cooperation with host nation governments, local partners, and nongovernmental organizations (NGOs), USAID and the State Department have sought to improve governance, develop community resilience, and reduce the impact of VEO narratives on populations across Africa. TSTCP – the largest of the programs focused on the often ungoverned spaces of northern

Africa – targets "youth empowerment, education, media, and good governance."[15] Mechanisms under TSCTP include micro-grants for schools and teacher training, funds for strengthening the capacity of local NGOs, youth development initiatives, and technical and content assistance for increasing information flow on issues of peace and tolerance. Funding for these programs remains small in comparison with investments in military solutions; the USAID budget for TSCTP in fiscal year 2005 was roughly $5 million, increasing to $9 million by FY 2009, with $16 million projected in the FY 2012 request.[16] Despite the prominence of the soft side approach in the new U.S. strategy – as evidenced through the U.S. military's new Concept Plan 7500 (CONPLAN 7500) which explicitly pushes development and diplomacy upstream and military force downstream[17] – little is known about its actual effects on targeted populations. One recent overview of multiple studies found mixed-effects from development-based CVE strategies in the field in Iraq and Afghanistan based primarily on job creation and economic approaches.[18]

This article seeks to measure the outcome of intensive US government activities in West Africa through a quasi-experimental paired-comparison study of 200 respondents from two similar towns in the nation of Mali. While a military coup headed by Captain Amadou Sanogo overthrew Mali's elected president Amadou Toumani Toure in late March 2012 (and pro-junta protestors attacked interim leader Dioncounda Traore in late May 2012), the country had been a stable if weak and developing democracy since the early 1990s. Mali, with more than 15 million people, remains among the poorer nations of the world[19] and one in which a Tuareg separatist movement in the north has worried many observers who fear a potential alliance with al Qaeda in the Islamic Maghreb (AQIM).[20] As a result of recent battles between the National Movement for the Liberation of Azawad (MNLA, which formed in 2011) rebel group in northern Mali and

government forces, more than 320,000 people have fled their homes. USAID has been carrying out a number of programs since 2005 in Mali focused on strengthening the resilience of local communities to the messages and inducements offered by violent extremist groups in the region such as AQIM.

Landlocked Mali presents a critical case study[21] for illuminating the impact of CVE programming given its poverty, illiteracy, ungoverned spaces where the state has little capacity, and long-term internal conflicts. Tuareg-led groups have sought independence for the north and has fought on and off against the central Malian government since 1960 (the end of French colonial rule). Mali's colonial legacy and series of coups have created weakened political institutions and it has suffered from food insecurity.[22] Further, the countering violent extremism programming in Mali has been experimental and less developed than in other nearby Sahel countries.[23] Should the data from this study show that U.S. programs altered behaviors and attitudes under such difficult conditions, it would indicate *a fortiori* that these tactics would have an impact in more hospitable and stable locales.

This article makes several contributions to the literature. First, "measuring and evaluating counter-terrorism policies" remains an understudied topic[24] and "[t]he majority of the literature in the field comprises commentary and critique and lacks an empirical research basis."[25] One estimate based on the review of more than 100 articles found that less than 10 percent used quantitative analysis to illuminate the outcomes of radicalization and de-radicalization programs.[26] Recognizing these broader gaps in the research field, this article seeks to provide a quantitative analysis of US government programming in Africa using new data from the field along with multiple analytical techniques. The conclusions drawn by this paper are

based on a paired-comparison type quantitative field study undertaken in December 2010 using multiple approaches to analyze the data.

Next, while many in the West are concerned about internet use by VEO recruiters, most of the population in the Sahel lacks access to the internet, and instead receives ideas via radio. Perhaps six percent of Africa's population has regular access to the internet, and studies have shown that more than 85 percent of Malians have never used it.[27] Similarly, due to a lack of infrastructure, very few residents in Mali have regular access to electricity and thus television programming. Although cell phone use is rising, phones themselves serve as conduits for radio programming, as even the base-model cell phones offered in Mali have FM radio receivers.[28] This study partially focuses on whether or not populations in Mali access existing CVE messages available to them through a more available medium: local radio stations.

Finally, this study underscores that there is no "silver bullet" in reducing violent extremism. Given the large number of tools available in the fields of public diplomacy, democracy promotion, and development, studies have yet to identify a single tactic which can work in all countries and cultures. Instead, as this study emphasizes, strategies must be tailored to specific local communities based on cultural, linguistic, historical, and contextual factors[29] and may have only partial effects on the target audience.

This article first lays out the theories explaining what factors might drive behavioral and attitudinal changes, then explains the data used in the study and the methodologies used to analyze the data. Beginning with bivariate, Chi-squared tested analyses, the paper moves on to multivariate regression techniques and propensity score matching to better support causal claims about the connections between variables of interest. It discusses the results, sets out the next

steps in the research agenda, and concludes with broader lessons about countering violent extremism programming.

Theory

This study sought to understand if several years of U.S. government-funded programs altered cognition and behaviors of Malians through a quasi-experiment involving 200 respondents in the paired cities of Timbuktu and Dire. Past experiments have used similar paired-village frameworks in which similar communities are studied to better understand the impact of policy interventions such as radio programming; in such field tests, one village or city receives the treatment (in this case, U.S. programs) while the other does not.[30] The Trans-Sahara Counter Terrorism Partnership (TSCTP) in Mali sought to increase civic participation, reduce inter-group tension and violence, and strengthen the resilience of vulnerable groups – such as young men – to recruitment by violent extremist organizations. Strategic communication, such as messages broadcast through radio programming, can "help foster positive social networks, provide opportunities for individuals to gain respect and recognition, [and] increase the circulation of moderate voices and perspectives."[31] It focused its programming on Timbuktu and bypassed Dire.

The core **outcomes** (dependent variables) of interest here are accessing peace and tolerance programs on local radio channels, participation in community-level decision making, perspectives on Al Qaeda's use of violence in the name of Islam, and beliefs in whether or not the U.S. is fighting Islam (or terrorism). Policy planners hope that programs countering violent extremism will increase access to tolerance radio programming and civic participation, lead more residents to be critical of Al Qaeda's use of violence, and motivate people to see the United States as combatting terror, not Islam. Successful outcomes would theoretically make young

Malian men less vulnerable to recruitment by violent extremist organizations and more likely to remain embedded in positive, mainstream social and religious institutions. Hence should the TSCTP-based programs in Timbuktu prove effective, residents there should demonstrate these behaviors more than their counterparts in Dire (who are not receiving such messages or benefiting from extensive U.S. government programs). Research has shown that, beyond actual exposure to norm messaging and programming, a number of factors influence behaviors and attitudes: demographic factors, socioeconomic drivers, and intrinsic cultural attitudes.

The study controls for demographic factors such as **age**, **sex**, and **ethnicity**. Scholars have long argued that sex strongly determines behavioral and cognitive outcomes, with some arguing that women and men display differences due to intrinsic biological factors and others arguing for the role of education and socialization.[32] Whatever the reasons, analyses in Mali have shown broad differences between women and men in the areas of education, health care, governance, and economic growth,[33] and thus controlling for sex is critical. Another critical factor to take into account is age, as many attitudes develop through exposure, life experience, and education.[34]

A third demographic variable of interest is ethnicity – in this project whether or not the respondents in this area of northern Mali were Sonrai (also spelled Songhay, who traditionally were farmers) or Tuareg (who worked as herders). Ethnicity can strongly condition expectations about state and local population assistance based on levels of support or marginalization. Mali's long-simmering Tuareg rebellion has been fueled by the belief among many Tuareg that the government has failed to follow through on past promises and deliver needed services to their communities. Indeed, USAID researchers noted more than a decade ago that "[d]ue to the harsh climate, the lack of natural resources, high transport costs, a high illiteracy rate, and the nomadic

lifestyle of many of its inhabitants, the North, and particularly the Tuareg population, has not received an equitable portion of governmental resources."[35]

Socioeconomic and **political conditions** also impact norms and behaviors. The survey included questions about belief in political freedom, satisfaction with services in the community, contact with local political representatives, the imagined likelihood of a local council member listening to concerns, and the degree of efficacy that the respondent reported. These variables capture the perspectives of the respondents about their financial conditions and the political environments in which they live. Individuals less satisfied with the services that they receive from government officials or local government employees may be more likely to ignore moderating norm messages and instead seek out assistance from violent extremist groups. Similarly, marginalized Malians who see themselves as having less efficacy – that is, lack the ability to alter their political environment – may not seek to support the existing government, ignoring it or, ultimately, seeking to undermine it.

This study also includes a number of potential **cultural drivers** of behavior and attitudes, including impressions of the northern rebellion, views of the United States, support or opposition for the implementation of *sharia* (Islamic religious) law, and support or opposition for the use of violence in the name of Islam. Those who hold negative views of the U.S., support the implementation of Islamic religious law in a democratic state, and support violence in the name of Islam may be less likely to seek out messages of tolerance and peace and similarly less likely to become civically engaged. By including these characteristics as potential controls, the study disentangles potentially overlapping or highly correlated perspectives.

The core **treatment** / **control** variable (operationalized as a dummy) is whether or not residents were directly or indirectly exposed to five years of U.S. government programming

which sought to encourage them to tune into radio programming on peace and tolerance, mobilize them to participate in community decision making, and view VEO behavior negatively. U.S. government programs for the Trans-Sahel Counter-Terrorism Partnership (TSCTP) in the city of Timbuktu were run by a variety of partners over the period 2005-2010.[36] Thousands of Timbuktu's residents, exposed to a broad array of messages through educational, governance, and financial programs, were encouraged to tune into the peace and harmony radio programs run by local stations in local languages. Educational, norm messaging, and radio programs reached a broad population in Timbuktu.[37] For example, USAID helped provide new radio equipment, two-way communications radio, and training to multiple Timbuktu community radio stations. Regionally, teaching training programs broadcast over this network reached 1403 teachers in 217 schools in the area.[38] On average, at least 600 students would have benefitted from USAID sponsored educational programming per year.[39]

Beyond the Timbuktu residents who directly interacted with United States programming, past studies have shown how social networks rapidly transmit ideas throughout their members even in poor, underdeveloped rural areas.[40] Given the strong interdependence of ideas within geographically-defined communities, even weak ties (Granovetter 1973) between individuals in the network can spread new behaviors and attitudes through social learning and social influence.[41] Research on Malian social networks, for example, confirmed that they influenced individual decisions about critical health issues such as contraception.[42] Members in a community receive information about ideas and innovation – such as solving conflicts using mediation, and not violence – from their friends, acquaintances, and family who already engage in such behavior and promote it through their connections. In short, a large percentage of

Timbuktu residents were exposed to new norms both directly (through participation in US government programs) and indirectly (through their social networks).

Dire, in contrast, had little or no such U.S. government-sponsored programming over the 2005-2010 period, but radio tests in the area showed that local radios in Dire could pick up USAID-supported shows on issues of peace and tolerance from other, nearby locations. More than half of Malians rely on local radio as their primary source of trusted news and that the content often revolves around entertainment. Residents of both cities had the capacity, but not necessarily the motivation, to tune into programming which encouraged peaceful negotiations and nonviolent communication. Individuals in Timbuktu directly interacted with US government programming in schools, workshops, and indirectly through their social networks, while Dire based respondents had neither form of contact.

Data

The study utilizes data collected through a 14-question survey in mid-December 2010 in the cities of Timbuktu and Dire administered to 200 respondents in local languages by the *Association Malienne pour la Survie au Sahel* (Malian Association for the Management of the Sahel, AMSS).[43] The survey questions were structured as Likert-responses with scales from 1 to 5 for each answer, with 5 set as outcomes most favorable to the United States. Respondents within these cities were chosen at random from the broader population by surveyors visiting the community on foot; after knocking on doors, they identified themselves as surveyors seeking out the opinions of local residents and, if admitted, administer the survey. For security reasons and to avoid possible bias they did not identify themselves as contractors of the United States government. Figure 1 below provides a map of the two cities under study, which sit side by side in the northern half of the country.

[Figure 1 here]

The cities for the study were chosen deliberately, not randomly, through a paired comparison approach to data analysis.[44] Dire, the administrative center of the Diré Cercle, is a town and commune on the left bank of the Niger River in the Timbuktu Region of Mali. In 2009 its population was 22,365. Timbuktu, capital of the region of Timbuktu, has a larger population, closer to 54,000, but shares many of the demographic, civic participation, and gender characteristics of Dire. Table 1 below provides a comparison between the two cities.

[Table 1 here]

As Table 1 illustrates, both cities have Islam as their core religion and have mostly balanced sex ratios (that is, roughly equal numbers of women and men). While Dire has a smaller population than Timbuktu and has had a slighter smaller population growth rate over the past few years, it has higher rankings on several critical socioeconomic indicators, including voter turnout and poverty levels. Both also have similar levels of primary and secondary schooling, and both of these cities sit in an area of Mali with primary school attendance "well below the national average (between 26 percent and 31 percent)" (Nikolic 2007: 24). Roughly 1/3 of Malians have received no formal schooling, and only 5 percent have completed university. It is important to recognize the strong demographic, religious, and socioeconomic similarities between the two neighbor cities; with such parallel conditions, any differences in cognitive and behavioral outcomes are more likely the result of policy interventions (in Timbuktu) or natural conditions (in Dire).

Table 2 below provides descriptive statistics about the variables captured through the interviews; notice the regular variation of more than 1 point on the 5-point scale for these questions.

[Table 2 here]

The population captured through polling includes women and men from early to late adulthood (no one under 18 was interviewed) and showed diversity in its socioeconomic, political, and cultural perspectives. By and large respondents believed that the northern rebellion was not justified (with 1 being justified, and 5 being unjustified, the mean was 4.35), that the Malian government should work with the West to fight terrorism (a mean of 4.44, with 1 indicating disagreement and 5 indicating agreement), and some interest in instituting Islamic law (with a mean of 2.9, and 1 indicating support and 5 indicating a lack of support). There was broad variation in these answers, with an average standard deviation greater than 1 across the questions.

Methodology

The first step in analyzing the data uses a bivariate approach to see if there are any noticeable connections between exposure (and lack thereof) to the U.S. programming and outcomes of the key variables of interest. Cross tabulation with Chi-squared distribution tests of the treatment and control groups show a strong connection between exposure and listening to radio programs about peace and tolerance. Figure 2 below maps out the raw data from the polls into box-and-whisker graphs, with the line in the center of the box indicating the mean value, the ends of the whiskers showing the 5th and 95th percentile limits, and the outliers illustrated as individual points.

[Figure 2 here]

Notice that the difference between the responses of the two groups has a Chi-squared (probability value) of .017, meaning that there is a very strong connection between the location of the respondent in Timbuktu or Dire and his or her listening behaviors. The next outcome of interest, participation in decision making in the community, is illustrated through Figure 3 below.

[Figure 3 here]

The Chi-squared P value for this relationship is .002, again indicating a strong correlation between location and civic engagement. In contrast to the clear distinction in answers to questions about civic engagement and peace and tolerance program listening between Malians living in Timbuktu and Dire, bivariate tests of the other two outcomes of interest showed no measurable difference. The Chi-squared value for the answers to the question, "Is the U.S. fighting Islam or terror?" was .397 (indicating no strong divisions by control or treatment) while the answers for "Are Al Qaeda's activities justified under Islamic law?" had a value of .743 (again indicating little difference between the two groups). (I omit the graphs of these two outcomes for space considerations.) These initial analyses indicate the presence of a strong relationship for two of the four outcomes of interest, but these bivariate approaches have not attempted to control for confounding factors.

The next stage of analysis uses an ordered probit (oprobit) regression to control for various other factors, such as age, sex, demographic, socioeconomic, and cultural characteristics in illuminating potential relationships between the control/treatment groups and outcomes of interest. An ordered probit model is more appropriate here than a standard regression model because the outcomes of interest are limited, ordinal dependent variables (with a ranking from

one to five), while regressions assume continuous structures for outcomes. It is important to recognize that coefficient outputs of the ordered probit model cannot be interpreted in the same way as a regression model given the cut-points assumed by the analysis. Here, we focus on the P value for the treatment/control – should the P value sit at .05 or lower, it indicates a 95 percent probability that the relationship between this variable and the outcome is not due to randomness.

Table 2 demonstrates the outcomes of the oprobit model using the 16 independent variables captured by the poll to illustrate their relationship with the outcome of listening to peace and tolerance radio. Notice that for almost all of the variables, while the coefficients indicate some effect on the outcome, those coefficients are not statistically significant. The only independent variable with a statistically significant effect on the outcome of listening to such radio programs is whether or not respondents were in the control or treatment groups.

[Table 2 here]

Table 3 below shows the relationship between those variables and the outcome of participating in local decision making processes. Here, several dependent variables show up as statistically significant, including satisfaction with services, belief that the local councilor will listen, opinion about the United States, and age. But notice again that the variable of being in either Timbuktu or Dire has an effect almost as strong or stronger than the other variables, and its coefficient is statistically significant (with a P value of .034).

[Table 3 here]

For the other two outcomes of interest, however, being in Timbuktu or Dire had no measurable impact; for justifying Al Qaeda's activities under Islam, the P value for treatment/control was .520 (far above the cut-off of .05) and for the U.S. fighting Islam or terror, it was .298 (again, not statistically significant).

At this point the analysis has demonstrated that even controlling for confounding factors, being in the treatment or control group has a strong and significant correlation with civic engagement and listening to peace radio, but not with justifying Al Qaeda's behavior under Islam or on the question of whether the US is fighting terrorism or Islam. It is difficult to make a causal claim that exposure to U.S. programming leads to increased local participation and radio listening based solely on regression analysis results, however. To make a stronger claim requires re-ordering the data through propensity matching techniques to better resemble a twins-study type structure so that the treatment and control groups are alike in as many ways as possible.

Propensity matching takes an existing dataset and processes it, removing unlike observations to make the treatment and control groups as balanced and similar as possible.[45] In the same way that medical experiments often use twins who are alike in as many ways as possible – genetically and environmentally, for example, for twins raised in the same household – propensity score matching drops observations that are not on common support (that is, sit within the same range of the propensity score) and seeks to create a smaller and more comparable dataset. Doing so changes an observational dataset under quasi-experimental conditions closer to actual experimental conditions, hoping to reduce bias in the observations of treatment effects. Here, I used nearest-neighbor matching with replacement to create the new dataset and then measured the average treatment effect (ATE) for the four outcomes of interest. The average treatment effect here is the difference in the means between the outcomes of treatment (Timbuktu) and control (Dire) groups.

Figure 4 below displays the new, matched dataset in histogram form along the propensity score axis, comparing the treated and untreated (i.e. from Timbuktu or Dire) data along with whether or not the data were similar enough to be comparable (on common support).[46] Note that

the values at the ends of the propensity score spectrum were, by and large, off common support, and therefore not used to calculate the average treatment effect.

[Figure 4 here]

Table 4 below shows the average treatment effects for the four outcomes of interest (matching for the other covariates identified previously in the regression analysis) and displays the P value along with the 95 percent confidence interval around the estimated coefficients.

[Table 4 here]

The first two outcomes of interest have P values for their average treatment effects under the cut-off of .05, indicating that those values are statistically significant (this outcome is also visible in the 95 percent confidence intervals for these ATEs which rest entirely above zero). We see that in both cases, Malians in Timbuktu were roughly 40 percent more likely to listen to peace and radio programming and participate in local government activities than their similar counterparts in Dire. In contrast, the last two outcomes of interest had P values well above the statistical cut-off – meaning that the results are not statistically significant, and that there were no observable differences between the two.

Discussion and Next Steps

Bivariate analysis indicated a relationship between the responses of the Malians in two of the four outcomes of interest based on their exposure to multivectored U.S. programing. Similarly, ordered probit (oprobit) regressions showed strong differences between the two cities holding other variables constant for the variables of participation in local decision making and listening to the peace and tolerance radio programming. Just as with the bivariate analyses, the regressions found no measurable differences between the two in the "higher level" answers of

whether the US is fighting Islam or terrorism and whether or not Al Qaeda's use of violence was justified under Islamic law. Finally, propensity score matching analysis indicated that Malians living in the city of Timbuktu were 40 percent more likely to listen to peace radio and 40 percent more likely to be civically engaged than their similar counterparts in Dire. The same technique showed no measurable difference between the two communities in terms of their higher level perspectives on justification under Islam for Al Qaeda's use of violence or whether the U.S. is fighting Islam or terror.

Geographical proximity and highly similar background conditions between the treatment and control group help keep constant many unobserved correlates This paired city comparison – with very similar economic, demographic, and religious conditions in these neighboring communities – allows us to point toward U.S. programming as the core factor behind these different outcomes. Further, as Rosenbaum and Rubin (1985) have argued, propensity score matching allows us to make stronger claims about the causal relationships between variables, as the technique is not based on correlation (which could flow causally in either direction) and instead simply measures the differences in outcomes between the two, highly similar groups. Thanks to propensity score matching outcomes, we can be very certain that the targeted respondents in Timbuktu had measurably different cognitive and attitudinal outcomes on two of the four outcomes of interest than their counterparts in Dire. Consistent results across three types of methodological analyses demonstrate that U.S. countering violent extremism programs such as TSCTP have had measurable, if limited, results.

However, the selection of paired cities was not randomized and there is no direct way to link individual respondents to the U.S.-sponsored programs which may have influenced their behaviors and cognitions (as this data was not collected by the survey teams). As mentioned

previously, this study relies on the large amount of direct exposure to US programs among the Timbuktu population in combination with indirect exposure through second- and third-level social influence. Based on these initial results, scholars and policy makers should work to create stronger evidence about the impact of multi-vectored programming through three improvements.

First, future studies should use a larger number of observations linked directly to program exposure to ensure that the captured responses are representative of the larger universe of individuals in country. While 200 respondents provides a robust sample on which to draw, ongoing polling in Africa by the Department of Defense's AFRICOM affiliated contractors regularly poll 2000 or more residents. USAID, the State Department, and scholars interested in the effectiveness of U.S. government programming should invest additional resources in such field studies. Next, the best field studies have used completely randomized studies to better ensure a lack of bias.[47] Due to resource constraints and security concerns, this study used two contiguous, very similar towns which had very different levels of U.S. government programming, but future studies could use more stochastic-based heuristics in selecting field sites.

Finally, rather than relying on a side-by-side comparison alone, future studies should undertake a longitudinal study of interventions, beginning with baseline measurements in both the control and treatment communities and moving on to confirm individual-level exposure to relevant messages. By establishing baseline parameters in the treatment and control communities, the study could be structured along a "difference-in-difference" framework which has been quite popular in economic research.

Conclusions

Given that military solutions are not sufficient to end violent extremism, and that "an insurgency cannot be eradicated by force alone",[48] it is critical that academics, NGOs, and aid agencies work to develop "usable knowledge" about soft-side CVE policies. Such knowledge is both accurate and politically tractable.[49] This article has sought to advance our understanding of the power of multitrack, developmental USAID programming against violent extremism in Africa. It found strong evidence that the residents of the city of Timbuktu exposed to five years of U.S. sponsored programs had different cognitive and behavioral outcomes than their similar neighbors in Dire in two of the four areas of interest. Timbuktu residents were far more likely to listen to peace and tolerance radio and to take part in civic activities, but showed little difference terms of their beliefs about the U.S. fighting terror or Islam and Islamic justification for Al Qaeda's activities. These results confirm the results of other field experiments in Africa that programs such as reconciliation, peace, and tolerance radio may not change higher-level, abstract beliefs but can alter both norms and behavior.[50]

Studies in Chad and Niger illustrated that "radio programming stands out as a significant success story, well accepted – even beloved in many communities –and it has the broadest reach."[51] Given that community radio "can be a particularly cost-effective medium with a significant reach,"[52] policy makers should invest in ways to get people to tune in more often to specific types of programming. According to the Media Sustainability Index, Mali, for example, has more than 250 FM radio stations throughout the country and that much of the programming currently tends toward lighter, entertainment-based issues.[53] Radio programming which encourages inter-ethnic cooperation and nonviolence – such as that being used in Rwanda post-

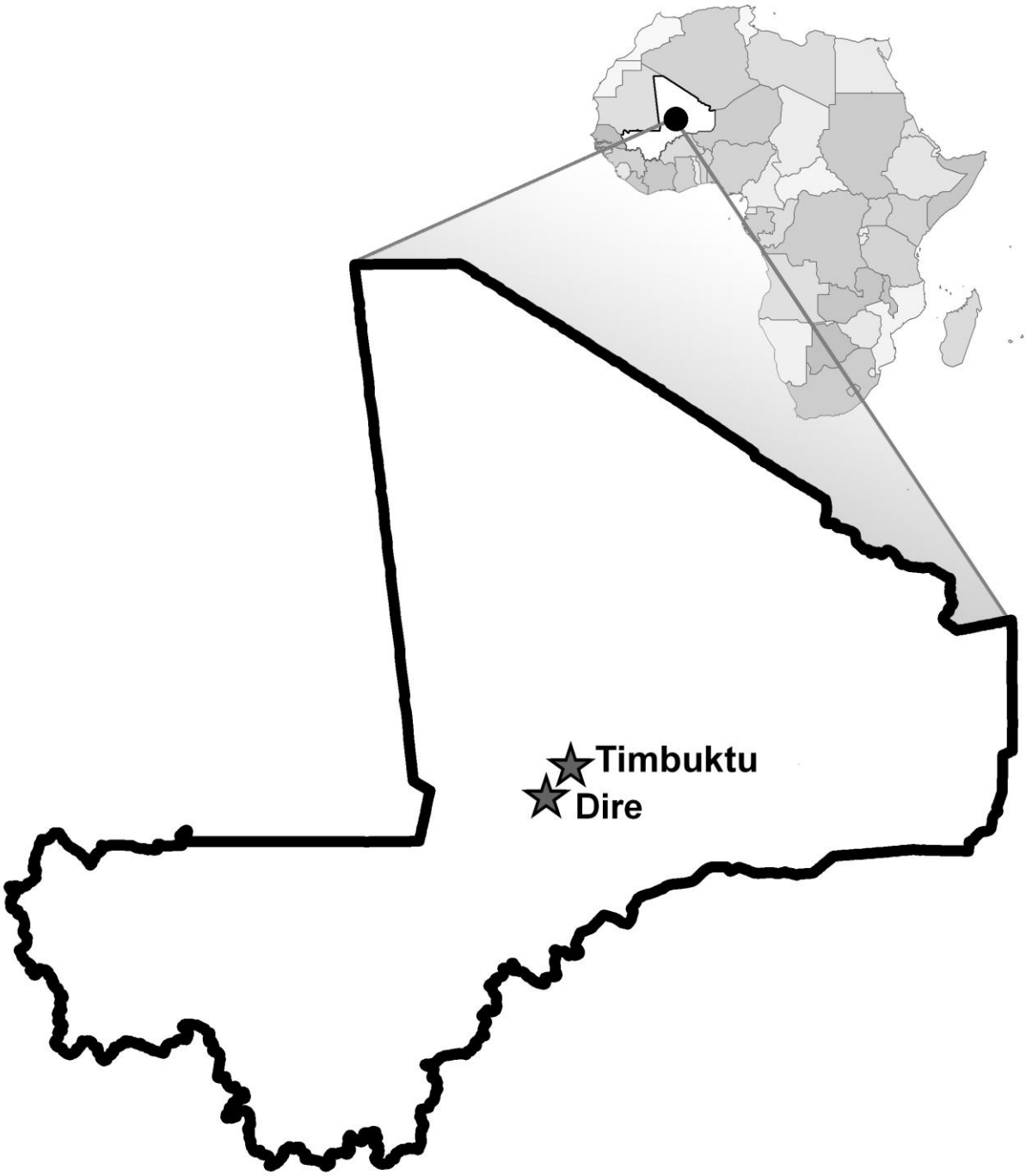
genocide to bridge gaps between Hutus and Tutsis- should become the baseline for future CVE toolkits in countries around the world.

Given the effectiveness of radio programming, policy makers should consider further investing in complementary programs which bring expand listening audiences and use norm messaging techniques to alter behaviors and attitudes. While radio programming itself is relatively inexpensive – training local residents to work as journalists and producers, setting up the physical infrastructure, and distributing hand-cranked or solar radios require small scale investments – the interventions which build up listeners are, by contrast, somewhat expensive. Distributing micro grants, strengthening educational and NGO infrastructure, and creating new industries requires extensive knowledge of local social structures, languages, and customs. U.S. planners should be prepared for long term engagements in communities of interest, and this may be a challenge for politicians and political appointees in the civil service often responding to short term electoral pressures.

Some have called Africa's current youth bulge the "cheetah generation" in that they are hungry for knowledge and opportunities while the elder generations – criticized as "hippos" – move more slowly to embrace change and have less autonomy to deviate from tradition.[54] The cheetahs have embraced social media, and their numbers – 450 million and rising – indicate that future programs will need to reorient to include them and their methods of information gathering. In a decade, it may be that NGOs and aid agencies will move from radios to other, internet-based platforms for norm messaging. As the United States and other developed nations seek to influence the developing world away from the destructive messages and recruitment attempts of violent extremist organizations, policy makers should ensure that their solutions are grounded in local languages, cultures, and institutions. USAID's work in Mali and the Sahel may show that

this is the first step towards winning hearts and minds in the attempt to counter violent extremism.

Figure 1: Map of Paired Cities in Mali, Africa



Note: Figure produced by Jeremy Chevrier.

Table 1: Comparison of Timbuktu and Dire

City Name	Population (2009)	Population growth Rate (1998-2009)	Voter Turnout for Local Elections, 2009 (percentage)	Some primary schooling (2009, percentage)	Some secondary / high school (2009, percentage)	Female (2011, percentage)	Able to meet basic needs with some non-essential goods (2009, percentage)	Islamic (2009, percentage)
Timbuktu	54453	5.7	48.74	21.3	8.5	48	72.3	100
Dire	22365	4.7	56.14	27.3	9.1	50	81.8	100

Note: Population and growth rate data from Resultats Provisoires RGPH, République de Mali, Institut National de la Statistique 2009; voter turnout from Ministere de L'Administration Republique du Mali Territoriale et des Collectivites Locales 2009; additional demographic data from ORB surveys (personal communication, Cara Carter, April 2012).

Table 2: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
Free to join political organizations	200	4.62	0.71	2.00	5.00
Satisfaction with services	200	3.37	0.96	1.00	5.00
Participation in decision making	199	3.28	1.32	1.00	5.00
Contact with representatives	200	2.76	1.65	1.00	5.00
Likelihood of Councilor listening	200	3.37	1.02	1.00	5.00
Efficacy	200	4.11	1.00	1.00	5.00
Is the rebellion justified	200	4.35	1.27	1.00	5.00
Listen to tolerance and peace radio programs	200	3.98	1.07	1.00	5.00
Opinion on the US	200	3.91	0.96	1.00	5.00
Should Mali work with West to fight terrorism	200	4.44	1.20	1.00	5.00
Is violence in name of Islam justified	200	4.44	1.11	1.00	5.00
Are Al Qaeda's activities justified	200	4.44	1.13	1.00	5.00
Support implementing Sharia	200	2.91	1.86	1.00	5.00
Is the US fighting terror or Islam	200	4.66	0.88	1.00	5.00
Gender	200	0.66	0.48	0.00	1.00
Ethnicity	200	0.80	0.40	0.00	1.00
Age Group	200	3.29	1.48	1.00	5.00
Treatment / Control dummy	200	0.50	0.50	0.00	1.00

Figure 2

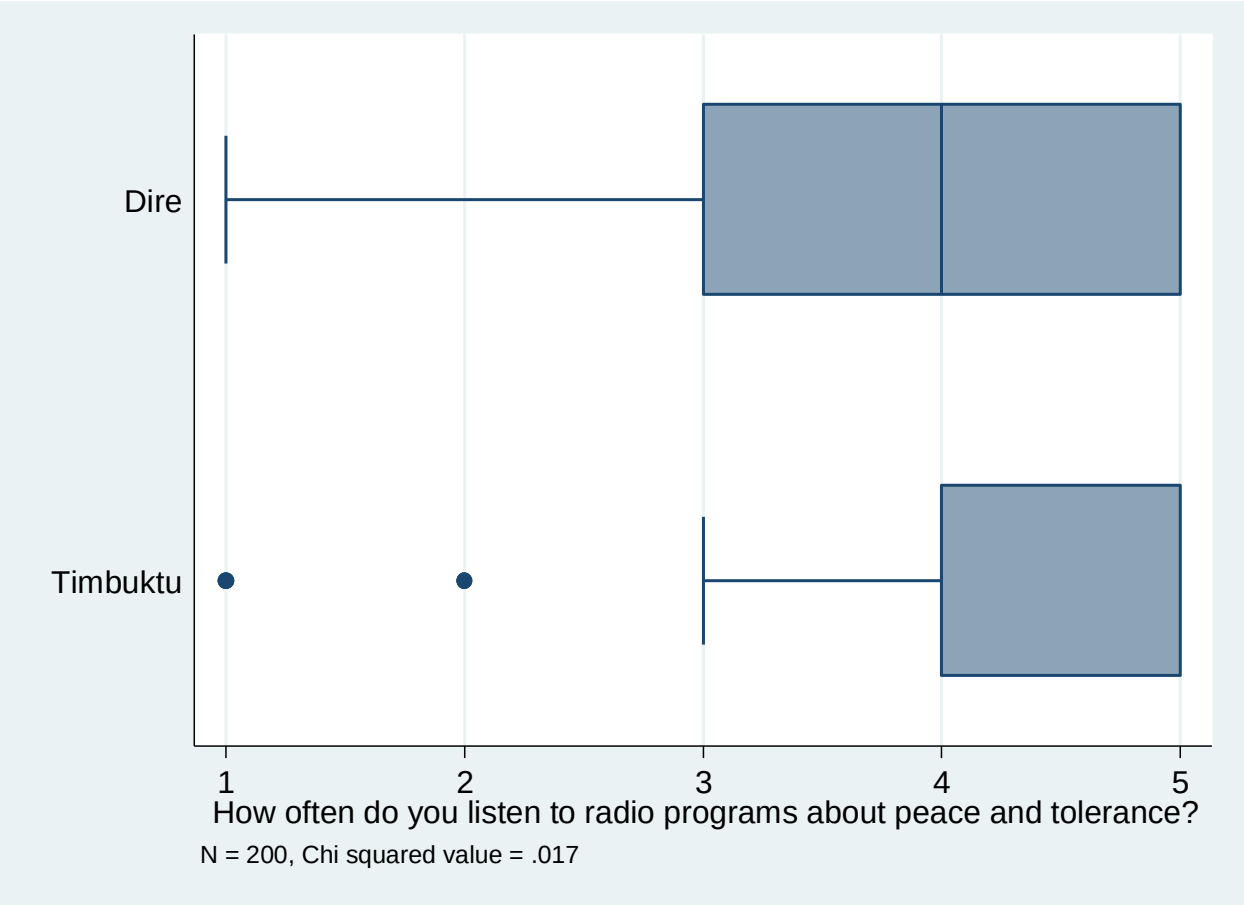

Dire
Timbuktu
1
2
3
4
5
How often do you listen to radio programs about peace and tolerance?
N = 200, Chi squared value = .017

Figure 3

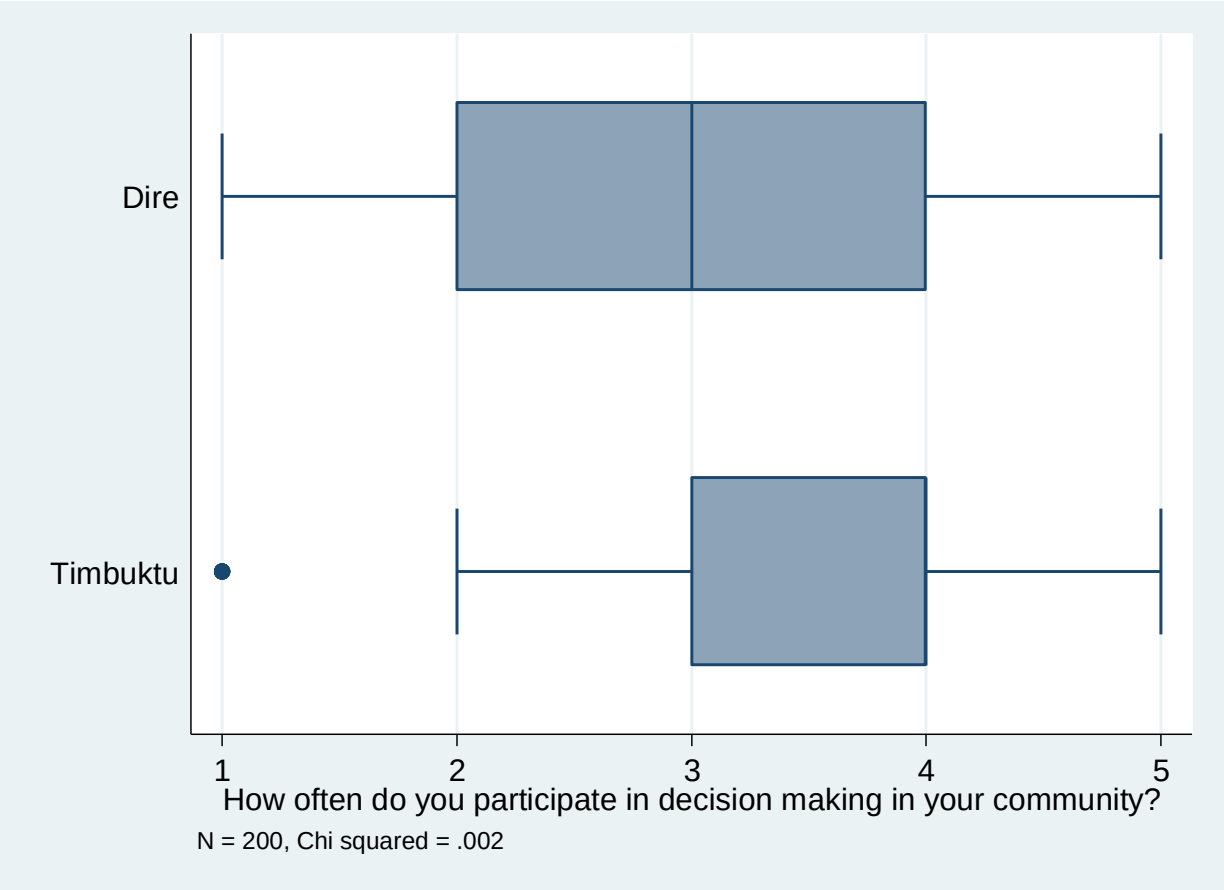

Dire
Timbuktu
1
2
3
4
5
How often do you participate in decision making in your community?
N = 200, Chi squared = .002

Table 2:

Ordered Probit Regression: Dependent Variable of Listening to Peace and Tolerance Radio	**Coefficient**	**Robust Std. Err.**	**z**	**P>z**	**Low CI**	**High CI**
Free to join political organizations	0.057	0.113	0.500	0.615	-0.165	0.278
Satisfaction with services	0.064	0.112	0.570	0.568	-0.155	0.282
Participation in decision making	0.085	0.079	1.060	0.288	-0.071	0.240
Contact with representatives	-0.017	0.053	-0.320	0.746	-0.120	0.086
Likelihood of Councilor listening	0.009	0.085	0.100	0.919	-0.158	0.176
Efficacy	-0.122	0.090	-1.360	0.173	-0.299	0.054
Is the rebellion justified or not	0.031	0.068	0.470	0.642	-0.101	0.164
Opinion on the US	0.121	0.092	1.300	0.192	-0.061	0.302
Should Mali work with West to fight terrorism?	-0.052	0.070	-0.740	0.456	-0.189	0.085
Is violence in name of Islam justified?	-0.006	0.087	-0.060	0.948	-0.176	0.165
Are Al Qaeda's activities justified?	-0.037	0.069	-0.530	0.595	-0.173	0.099
Support implementing Sharia	-0.002	0.053	-0.030	0.973	-0.105	0.102
Is the US fighting terror or Islam?	0.034	0.088	0.390	0.694	-0.137	0.206
Gender	-0.255	0.181	-1.410	0.159	-0.610	0.100
Age Group	-0.024	0.058	-0.410	0.685	-0.137	0.090
Treatment / Control dummy	0.448	0.167	2.690	0.007	0.121	0.775
/cut1	-1.172	0.945		-3.024	0.681	
/cut2	-0.921	0.941		-2.766	0.924	
/cut3	-0.094	0.938		-1.932	1.744	
/cut4	0.897	0.937		-0.938	2.733	

Table 3:

Ordered Probit Regression: Dependent Variable of Participation in Local Decision Making	**Coefficient**	**Robust Std. Err.**	**z**	**P>z**	**Low CI**	**High CI**
Free to join political organizations	0.042	0.110	0.380	0.701	-0.173	0.257
Satisfaction with services	0.523	0.118	4.420	0.000	0.291	0.755
Contact with representatives	0.106	0.055	1.930	0.053	-0.002	0.214
Likelihood of Councilor listening	0.202	0.082	2.460	0.014	0.041	0.362
Efficacy	-0.034	0.097	-0.350	0.729	-0.223	0.156
Is the rebellion justified or not	-0.063	0.075	-0.830	0.404	-0.210	0.085
Opinion on the US	0.290	0.104	2.790	0.005	0.087	0.494
Should Mali work with West to fight terrorism?	-0.081	0.086	-0.930	0.350	-0.249	0.088
Is violence in name of Islam justified?	0.084	0.095	0.890	0.373	-0.101	0.269
Are Al Qaeda's activities justified?	0.017	0.061	0.270	0.785	-0.103	0.137
Support implementing Sharia	-0.002	0.048	-0.040	0.967	-0.097	0.092
Is the US fighting terror or Islam?	-0.249	0.110	-2.260	0.024	-0.465	-0.033
Gender	-0.104	0.168	-0.620	0.537	-0.434	0.226
Age (grouped)	0.180	0.060	3.000	0.003	0.062	0.297
Control	0.371	0.172	2.160	0.031	0.034	0.708
/cut1	1.937	0.988		0.001	3.873	
/cut2	2.594	0.991		0.651	4.537	
/cut3	3.242	0.997		1.287	5.196	
/cut4	4.488	1.016		2.496	6.479	

Figure 4: Example of Evaluation of Balance for Matching

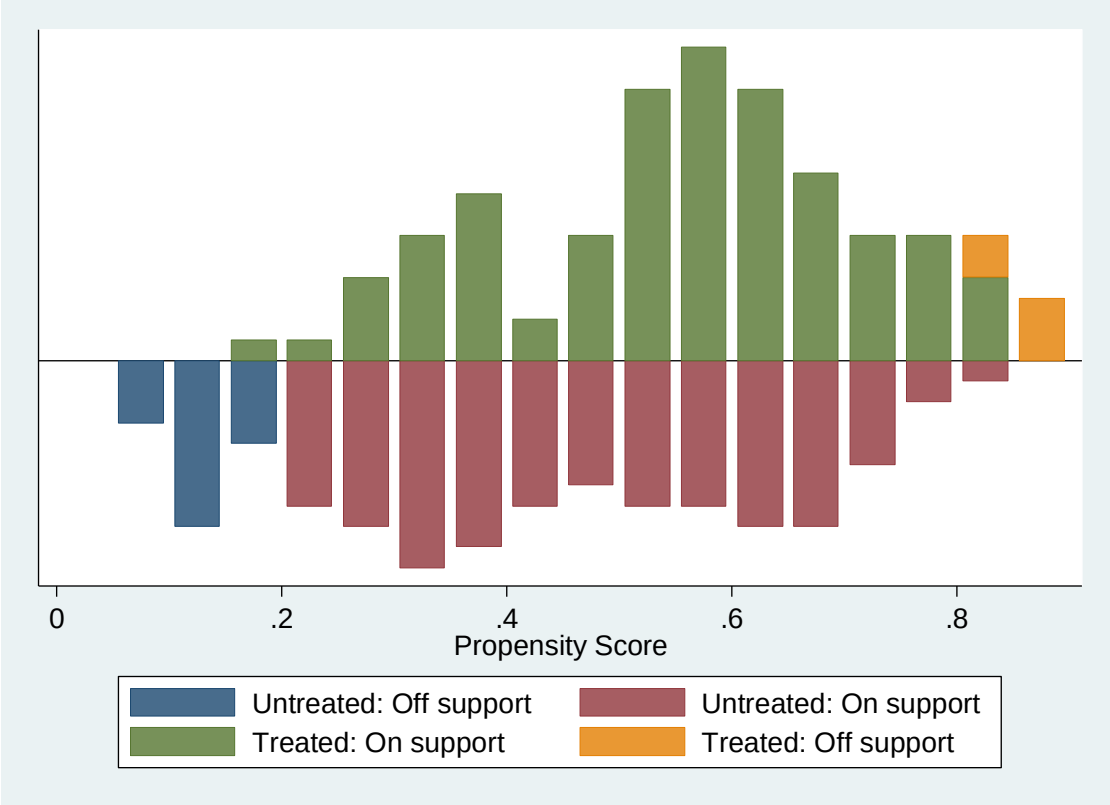


Table 4: Matching Outcomes for Four Quantities of Interest

Variable of Interest (ATE)	**Average Treatment Effect**	**Standard Error**	**z**	**P>z**	**[95% Conf.**	**Interval]**
Listen to peace and tolerance	0.43	0.19	2.25	0.02	0.06	0.80
Participate in decision making	0.40	0.18	2.25	0.03	0.05	0.76
U.S. fighting terrorism or Islam	-0.02	0.13	-0.15	0.88	-0.28	0.24
AQ justified under Islam	-0.12	0.18	-0.63	0.53	-0.48	0.24

[1] Amy Belasco, *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11* (Washington DC: Congressional Research Service 2011), 5.
[2] *Reuters News Service* 10 September 2008.
[3] Robert Deardoff, *Countering Violent Extremism: The Challenge and the Opportunity*. Masters' Thesis for Naval Postgraduate School, Monterrey, CA (2010), 4 and *New York Times* 20 March 2012.
[4] Anthony Ellis, Andrew Clearly, Michael Innes, and Martine Zeuthen, *Monitoring and Evaluation Tools for Counterterrorism Program Effectiveness* (Center on Global Counterterrorism Cooperation, 2011), 11.
[5] U.S. Department of State *Leading through Civilian Power: The First Quadrennial Diplomacy and Development Review* (Washington DC: State Department 2010); and Daniel P. Aldrich, "Mightier than the Sword: social science and development in countering violent extremism," in Rajiv Shaw and Steve Radelet, eds., *Frontiers in Development* (Washington DC: United States Agency for International Development 2012), 46-49.
[6] Michael Honda, "Rural, aid, not guns, key to Pakistan progress," *The Washington Times* 29 September 2011.
[7] John Campbell, "To Battle Nigeria's Boko Haram, Put Down Your Guns," *Foreign Affairs* 9 September 2011.
[8] Joseph Nye, "The Decline of America's Soft Power," *Foreign Affairs* May/June (2004) and Joseph Nye, "Why 'Soft Power' Matters in Fighting Terrorism," *Washington Post* 30 March 2004.
[9] Management Systems International (MSI), *Guide to the Drivers of Violent Extremism*. Produced for USAID under RAN-M-04-00049-A-FY-05-63 (2009).
[10] National Counterterrorism Center. *Radicalization Dynamics: A Primer* (Washington DC: NCTC, 2010).
[11] Some observers criticized USAID's involvement in such policies, arguing that they will lead to USAID being seen as a "quasi-security agency" especially because of the agency's past involvement in controversial programs such as the Congressionally-canceled Office of Public Safety. See Alice Hills, "Trojan Horses? USAID, counterterrorism and Africa's police," *Third World Quarterly*, Vol. 27, No. 4 . (2006), 629 – 643. It is also important to note that while some have turned their attention to de-radicalization programs focused on members of the American Muslim community, agencies such as USAID and State cannot operate domestically. See Lorenzo Vidino, *Countering Radicalization in America: Lessons from Europe* (Washington DC: United States Institute of Peace, 2010).
[12] Africa Center for Strategic Studies, *Preventing Youth Radicalization in East Africa: Program Report* (Washington DC: ACSS, 2012) and Marc Sommers, *Stuck: Rwandan Youth and the Struggle for Adulthood* (Atlanta: University of Georgia Press, 2012).
[13] Emily Hunt, "Islamist Terrorism in Northwestern Africa: A 'Thorn in the Neck' of the United States?" Policy Focus #65 *Washington Institute for Near East Policy*.
[14] Andre Le Sage, "Africa's Irregular Security Threats: Challenges for U.S. Engagement," *Strategic Forum* No. 255 May (2010), 1 -12.
[15] Earl Gast, "Examining U.S. Counterterrorism Priorities and Strategy across Africa's Sahel Region," Testimony before the Subcommittee on African Affairs, Committee on Foreign Relations, United States Senate, November 17 2009.

[16] United States Agency for International Development. "Trans- Sahara Counterterrorism Partnership: A Case Study. Conflict and Humanitarian Assistance" (Presentation from April 2007), 3 and United States Agency for International Development, *Executive Budget Summary: Function 150 & Other International Programs FY 2013* (Washington DC: USAID, 2012), 116.
[17] The Department of Defense CONPLAN 7500 intends to "drain the swamp" for VEOs abroad. See Eric Olson, "A Balanced Approach to Irregular Warfare," *The Journal of International Security Affairs* 16 (2009).
[18] Nicholas Sambanis, Jonah Schulhofer-Wohl, and Moses Shayo, "Parochialism as a Central Challenge in Counterinsurgency," *Science* 336 (2012), 808.
[19] The United Nations Development Program (UNDP) ranked Mali 175th out of 187 countries in its 2011 Human Development Index.
[20] Polls and focus groups indicate that many Tuareg in fact remain distant from the AQIM ideology but there have been anecdotal reports of alliances-through-marriage in the area. Roughly 90 percent of Malians see the influence of AQIM as negative and 97 percent of them are unwilling to support AQIM or Al Qaeda (personal communication, Cara Carter, February 2012). Nevertheless, the arrest and conviction of a Malian national in 2009 on charges of drug smuggling to raise funds for AQIM along with several kidnappings by AQIM in Mali remain serious concerns for the national security establishment.
[21] Bent Flyvbjerg, "Case Study," in Norman K. Denzin and Yvonna S. Lincoln, eds., *The Sage Handbook of Qualitative Research*, 4th Edition (Thousand Oaks, CA: Sage, (2011).), 307.
[22] Kaal Nikolic, "No one grows rich on a gift: Poverty, educational development, foreign aid and the community schools movement in Mali," *Africana* Vol 1 No. 1 (2007), 14-40.
[23] Author interviews with USAID personnel, April 2012.
[24] Alex Schmid, "50 Un- and Under-researched Topics in the Field of (Counter-) Terrorism Studies," *Perspectives on Terrorism* Vol. 5 No. 1 2011.
[25] Counter Terrorism and Security Technology Centre, *Countering Violent Extremism (CVE) Literature Review* (Australia: Australian Government Department of Defence, Defense Science and Technology Organisation, 2011). Measuring the outcomes of deradicalization and countering violent extremism programs has been difficult because of the challenges in measuring a non-outcome, that is, convincingly demonstrating that a certain number of individuals did not engage in violent acts because of a certain policy intervention. The challenge is deepened by the reality that very few individuals engage in such behaviors out of the larger population of potential terror recruits.
[26] Peter Neumann, "How Rigorous is Radicalization Research?" Presentation at the Countering Violent Extremism – Radicalization Research and Development Community of Interest Meeting conference held 27 January 2012 in Washington DC.
[27] TMS Ruge, "Africa's booming tech space," *Globe and Mail* 10 May 2010.
[28] Personal communication, Mali NGO leader, 10 May 2012.
[29] Air Force Research Laboratory. *Countering Violent Extremism: Scientific Methods & Strategies* (Ohio: Wright-Patterson Air Force Base, 2011).
[30] Elizabeth Paluck, and Donald Green, "Deference, Dissent, and Dispute Resolution: An Experimental Intervention Using Mass Media to Change Norms and Behavior in Rwanda," American Political Science Review. Vol. 103, No. 4 2009 622- 644.

[31] Karen Greiner, *Applying Local Solutions to Local Programs: Radio Listeners as Agents of Change* (Produced for USAID under DFD-1-07-0500244-00, 2010), 3.
[32] Daniel P Aldrich and Rieko Kage, "Mars and Venus at Twilight: A Critical Investigation of Moralism, Age Effects, and Sex Differences." *Political Psychology* Vol. 24, No. 1, 2003 23-40.
[33] Marcia Greenberg, and Marieme Lo, "Enhancing the Utility and Efficacy of USAID/Mali's 2003–2012 Country Strategic Plan through Gender Analyses and an Action Plan. Development Alternatives," (Washington DC: USAID, 2002).
[34] Daniel P. Aldrich and Rieko Kage, "Japanese Liberal Democratic Party Support and the Gender Gap: A New Approach," *British Journal of Political Science* October 2011 41 713-733.
[35] William Farrell and Carla Komich, (USAID/DCHA/CMM Assessment: Northern Mali. Management Systems International Contract No. AEP-I-22-99-00040-00. 2004), 6.
[36] Implementers included Management Systems International (MSI) which worked on governance issues, International Executive Service Corps (IESC) and GeekCorps which worked with radio programming, and the Education Development Center of Programme Harmonisé d'Appui au Renforcement de l'Education (Program to Standardize and Strengthen Education, PHRARE) which worked on educational programming. Additionally, several organizations, including Trickle Up, Abt Associates, and Mali Pro Nord ran economic programs in the area. See AMEX Group, *Mid-Term Evaluation of USAID's Counter-Extremism Programming in Africa*. (Washington DC: USAID, 2011), 26.
[37] Author interviews with USAID personnel, April-May 2012.
[38] Terence McCulley, *Performance Report on Fiscal Year 2007 for Mali* (Washington DC: USAID, 2007).
[39] Personal communication, USAID personnel, May 2012.
[40] Hans-Peter Kohler, Jere Behrman, and Susan Watkins, The Density of Social Networks and Fertility Decisions: Evidence from Nyzana District, Kenya. *Demography*, Volume 38-Number 1, February 43–58 (2001).
[41] Mark Montgomery, Mark and John Casterline, "Social Networks and the Diffusion of Fertility Control," *World Population Council* Paper No. 199, 1998.
[42] Alayne Adams, Dominique Simon, and Sangeetha Madhavan, "Women's Social Support Networks and Contraceptive use in Mali," In Bandana Purkayastha and Mangala Subramaniam, eds., *The Power of Women Informal Social Networks: Lessons in Social Change from South Asia and West Africa* (Maryland: Lexington Books, 2004), 31-46.
[43] AMSS is a nongovernmental Malian organization established in 1991 which has been a regular implementing partner with western development and aid organizations such as USAID, the Turing Foundation, and Living Earth and carried out the survey on behalf of USAID.
[44] Sidney Tarrow, "The Strategy of Paired Comparison: Toward a Theory of Practice," *Comparative Political Studies* 43(2) (2010), 230-259.
[45] Paul R Rosenbaum and Donald B Rubin, "Constructing a control group using multivariate matched sampling methods that incorporate the propensity score," *American Statistician* 39(1). (1985), 33–38.
[46] Edward Leuven and Barbara Sianesi, "PSMATCH2: Stata module to perform full Mahalanobis and propensity score matching, common support graphing, and covariate imbalance testing," http://ideas.repec.org/c/boc/bocode/s432001.html (2003).
[47] Jaimie Bleck, "Mali Briefing," Presentation given at USAID's Africa Bureau in Washington DC, 20 April 2012.

[48] Moshe Kress, "Modeling Armed Conflicts," *Science* Vol. 336, 868.
[49] Peter Haas, "When Does Power Listen to Truth? A Constructivist Approach to the Policy Process," *Journal of European Public Policy* 11 (4) 2004, 572.
[50] Elizabeth Paluck, "Reducing Intergroup Prejudice and Conflict Using the Media: A Field Experiment in Rwanda," *Journal of Personality and Social Psychology*, 2009, Vol. 96, No. 3, 582 and Paluck and Green 2009 (see note 30 above).
[51] AMEX 2011, 45 (see note 36 above).
[52] United States Agency for International Development (USAID). *The Development Response to Violent Extremism and Insurgency: Putting Principles into Practice* (Washington DC: USAID, 2011), 5.
[53] See http://www.irex.org/resource/mali-media-sustainability-index-msi.
[54] George Ayittey, *Africa Unchained: The Blueprint for Africa' Future* (New York: Palgrave, 2005).