

## Supplemental Information for “Women’s Participation in Violent Political Organizations<sup>1</sup>”

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In this supplement, we describe in detail how our main dependent variables capturing women’s participation in violent political organizations were coded. In Section II, we discuss our strategies for gathering data on the main explanatory variables measuring organization-level characteristics and describe the coding rules for the remaining control variables. In Section III, we provide more detailed information regarding where our case, Eritrea (1961-1991), fits within the cross-sectional data. Section IV includes additional tables demonstrating the robustness of the statistical results presented in the paper. A list of all VPOs in our sample and summary statistics of the data are in Section V.

### Definition of VPO:

In this paper, we examine women’s participation in violent political organizations (VPO). A VPO is defined as any named *sub-state* organization of two persons or more using violence as a primary means of bargaining over a political good or issue. We include in our sample, organizations with a minimum of two members, as we are interested in the dynamics of collective action. Without a collective, or a group of individuals working toward a common goal or interest, there is no potential collective action problem and the organizational dynamics we believe explain women’s participation are irrelevant. As by definition, a collective must be made up of more than one person, we include groups that meet this criterion, as any of these organizations have the potential to include women. However, as one of our main explanatory variables is organization size, we do not restrict our sample to organizations of a specific size, as it would hamper our ability to examine this hypothesis (H1). We do, however, restrict the range of organizations we consider to those having adopted a name. This allows us to exclude spontaneous or ephemeral organizations, and include only organizations that are organized. Lastly, all organizations in our sample must be motivated primarily by politics. Given these conditions, our sample is made up of rebel, domestic terrorist, paramilitary and self-defense organizations.

In the section that follows, we discuss how we code the dependent variables for each VPO in our sample.

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## Section I. Women's Participation in VPOs

The data on women's participation in violent political organizations was collected by searching systematically through a variety of sources, including news reports generated by LexisNexis Academic, memoirs, organization statements, historical accounts, academic articles, as well as reports furnished by human rights organizations. Below, we describe our coding procedures and give examples of the types of information provided by the thousands of sources we consulted. We offer representative examples because the sources are too copious to list here.

The researchers (the authors and their research assistants) first began by conducting searches for general articles on each individual VPO and then advanced to more targeted searches for evidence on women's participation using both *LexisNexis Academic* and *Google (Web, Scholar, and Books)*. Search terms included the VPO's name followed by the woman, women, female, girl, WAFF or GAFF.<sup>2</sup> In addition, we added terms like combatant, fighter, cadre, forces, army and troops. A LexisNexis search conducted by our researchers would resemble the following:

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[VPO Name] w/5 (woman OR women OR female OR females OR girl OR WAFF OR GAFF)
AND COUNTRY([Country Name])
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As LexisNexis sometimes returned thousands of sources in a single search, including those irrelevant to our project, researchers would add terms or be more/less restrictive with the required proximity of search terms to generate a more tractable list of results. In cases where very little information was returned, researchers would removed restrictive search terms (ie. fighter, troops) to generate a more abundant list of sources to review. Researchers also searched *Google Books* using a similar procedure. Coders were instructed to use the relevant sources obtained to locate other sources through both internet and library searches. In other words, researchers were asked to look at materials near a book of interest on library shelves, for example, to help locate sources that were not returned in any search but were directly relevant to the project. They also searched reference lists to locate additional sources that might help code whether a VPO included women members and what functions those members performed. Many useful sources were located this way.

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<sup>2</sup> WAFF is an acronym for women associated with fighting forces while GAFF represents girls associated with fighting forces.

Different types of searches tended to return different types of information. A *Google Web* search might return some news articles but also information from organizations like Human Rights Watch (HRW), Africa Watch and the Advocates for Human Rights. *Google Books* located academic books and some published policy papers on particular VPOs, their conflicts, or individual members associated with VPOs. *Google Scholar* was useful for locating academic articles on particular VPOs and conflicts, while LexisNexis returned mostly news articles generally reporting on VPOs in the context of conflict. We used thousands of sources like the following to code our main dependent variables, *women's participation* and *women in combat roles*. For each VPO, we attempted to gather at a minimum, three distinct sources detailing women's involvement. In only about 20% of the cases were we unable to do so. In statistical models that include all other observations, the results of our main explanatory variables were robust to the inclusion or exclusion of observations where fewer than three sources indicating women's participation were found. These models are shown in Tables 10 and 11.

#### **Examples of Sources Used to Code Women in VPOs :**

When searching for information regarding women's participation in the Liberian group, Movement for Democracy in Liberia (MODEL), for example, we located a 2004 Human Rights Watch Report discussing a fifteen-year-old female combatant in that organization. The source writes, "*Given a full uniform, she is both a fighter in the forces and a wife to the general... many older girls play such dual roles in the forces not only in MODEL, but with LURD and the government as well* (HRW 2004,17-18)."<sup>3</sup> This article was used as one source detailing women's roles in two different VPOs, MODEL and Liberians United for Reconciliation and Democracy (LURD).

Reports providing great detail like Mazurana and Carlson's were useful for cataloguing women's diverse roles within VPO's. Referring to the CDF/Kamajor's in Sierra Leone, Mazurana and Carlson (2004) write, "*They enlisted and initiated women and girls where they acted as integrated members of the CDF and were included in all ceremonies, amulets, and scarification. They served as commanders, frontline fighters, initiators, spiritual leaders, medics, herbalists, spies, and cooks*" (Mazurana & Carlson 2004, p.13).

*LexisNexis Academic* searches returned a large number of news articles about women's participation in VPOs. For instance, that women were participants in organizations like the Movement for the Liberation of Congo (MLC) in the Democratic Republic of Congo, was evident from news sources,

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<sup>3</sup> 2004. "How to Fight, How to Kill: Child Soldiers in Liberia." *Human Rights Watch* 16(2):A

like the following: *"The 17 men and two women, who belong to Jean-Pierre Bemba's Movement for the Liberation of Congo (MLC), are accused of crimes including killing, torture, rape"* (BBC 2003)<sup>4</sup>

An article discussing the repatriation of former soldiers from the Democratic Front for the Liberation of Rwanda (FDLR) suggests that women participated in this VPO. Regarding the repatriated individuals, the article states that *"Those from FDLR include 51 men including two captains, 48 women and 137 children. Among the civilians are 52 men, 174 women and 42 children."* (Africa News 2009).<sup>5</sup> Another article clarifies women's roles within this organization. On June 6, 2007, an article supplied by Africa News writes *"In Congo, the extremists Rwandan Hutus, operating under the umbrella of FDLR...use bases inside Virunga and Maiko national parks to raid neighbouring villages. In these camps, women are trained as soldiers, and children are born and brought up as soldiers"* (Africa News 2007).<sup>6</sup>

Speaking of the Oromo Liberation Front (OLF), an article states *"the rebels numbered between 700 and 1,000, including men and women"* (The Indian Ocean Newsletter 1998).<sup>7</sup> We were able to utilize additional sources like a report written by Child Soldiers International (2001) to support the notion that women were present in the OLF, but also to catalog that some female participants fought in an all female battalion. The report states *"many young boys and girls voluntarily joined the OLF. Two 22-year-olds who claimed they had been fighting in the OLF for 11 years additionally reported the existence of a battalion of about one hundred women and girls."*<sup>8</sup>

Some books provided thin accounts of women's involvement in VPO's. For instance, Feyissa and Höhne (2010,92) write *"Afar young people including females joined the FRUD in order to end the Issa domination and intrusion as they claimed."* While greater detail, however, could be garnered from books like Baker (1998), Beswick (2000) and McKay and Mazurana (2004).

#### Individual women within VPOs

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<sup>4</sup> "DR Congo rebels go on trial" February 18, 2003. BBC News World Edition

<sup>5</sup> "UN Agency Repatriates Some 504 Rwandans From Eastern Drcongo" *BBC Monitoring Africa – Political*. February 11, 2009.

Africa News "Rwanda; More FDLR Combatants And Hostages Repatriated From DRC" February 11, 2009

<sup>6</sup> Africa News "Congo-Kinshasa; Is a Genocide Looming in Eastern Congo?" June 6 2007;

<sup>7</sup> The Indian Ocean Newsletter 1998 "Oromo Rebels Get Ultimatum" July 18, 1998

<sup>8</sup> Child Soldiers International, *Child Soldiers Global Report 2001 - Ethiopia*, 2001, available at: <http://www.refworld.org/docid/498805fc2.html> [accessed 8 July 2014]

Another profitable way to code information on women roles within VPOs was to search for individual women known to have participated in these groups. For example, Norma Kitson's autobiography, *Where Sixpence Lives*, provided very useful information about women's early involvement in Umkhonto we Sizwe (MK), the African National Congress' (ANC) military wing. Many other books and articles provided detailed information about individual women participants in other VPOs. Searching for information on Beja Congress, for example, uncovers the following source on a prominent woman's participation and role within that organization. Sara Abbas writes "*Amna Dirar, Associate Professor of Management at Sudan's Ahfad University for Women, is also the secretary-general of the Beja Congress, the political opposition movement which makes up the largest part of the Eastern Front alliance. In addition, Dirar is the vice-president of the Eastern Front itself and, as such is the only woman in Sudan at this high level of a political and rebel movement*" (Abbas 2007, 97).

In addition to a more general discussion of women's participation in the forces of the Anya Nya in Sudan, Beswick (2000) mentions by name two notable women within that VPO. Beswick (2000:100) writes, "*Within the Anya Nya guerilla movement organized by Southerners against the Islamic Northern Government, women began to enter the military forces on the front lines. Some achieved the rank of officer; among the better known was a Nilotic female Ani Dit who fought in the early 1960's and a Balanda-Fertit woman named Lucia Hilal from the western Bahr al-Ghazal.*" Discussing women's participation in another Sudanese VPO, Hale (2001, 84), writes that "*A number of SWA women emerged as leaders in the National Democratic Alliance (NDA, an umbrella group for opposition parties), including Nada Mustafa Ali, a scholar and activist whose visibility in the NDA rivals that of Women's Union member Fatima Ahmed Ibrahim.*"

### **Coding the Dependent Variables**

*Women Participants* is coded "1" when there is evidence that women took on any role in an organization and "0" otherwise. Women could participate by doing anything within an organization. This could include roles as cooks, medics, spies, fighters, fundraisers and mechanics. Only participation occurring within the context of a group is considered; women acting alone or in unorganized groups are not reflected in these data, although they can certainly contribute to broader patterns of violence. This decision is motivated by our interest in examining the behavior and composition of VPOs. Women's violent activity outside an organization cannot be explained by organization-level characteristics.

*Women in combat roles* measures women's involvement in roles that necessitate the direct use of violence. This variable is coded "1" when there is direct evidence that women participated in direct combat as well as remote combat activities like detonating bombs; zero otherwise. All other types of participation are coded as zero.

## **Section II. Organization-Level Characteristics and Other Covariates**

In this section we describe in greater detail the independent variables coded to test our hypotheses.

### *Organization Size*

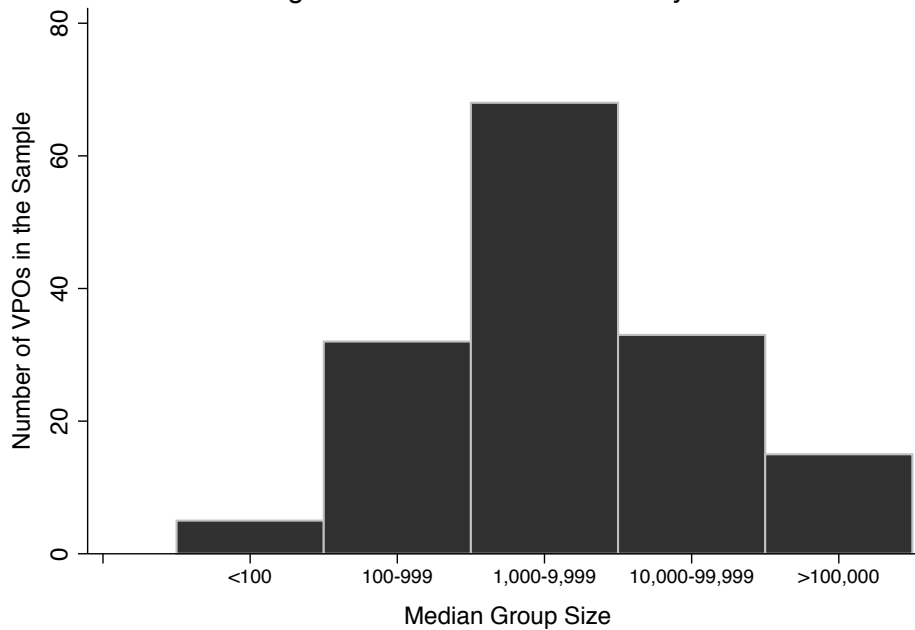
We hypothesize that women are less likely to participate in small VPOs, as these organizations are more likely to feel adverse effects from women's inclusion than larger groups. To test this, detailed information on the size a VPO's membership is required. Although troop strength measures exist for *some* of the rebel organizations in our sample, datasets do not include estimates for the other types of non-state actors. Therefore, we collect information on each group's size with a focus on the organization's operational capacity. Particularly, we attempt to gain an accounting of the number of individuals operating in an active capacity within an organization. This is in contrast to passive membership in an organization's political wing, for example. We collect these data from open source materials such as records of demobilization, disarmament and reintegration processes, organization and conflict histories as well as news stories.

In our sample, the smallest size estimate is for Orde Boerevolk in South Africa. In 1990, as per the organization's founder Piet Rudolph, the organization comprised approximately five agents.<sup>9</sup> The largest VPO estimate, on the other hand, is for South Africa's Inkatha Freedom Party (IFP) estimated as having 2,000,000 members. That organizations do not remain the same size throughout their history necessitates that we aggregate the estimates we find. We use the median estimate of a group's reported size to generate a measure of organization size. The average median estimate is 23,840 members. Figure 1, displays the distribution of organization sizes, by median estimate.

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<sup>9</sup> This information was found in a transcript of a Truth and Reconciliation Commission amnesty hearing held on December 12, 2000. The full transcript can be found on the South African Department of Justice and Constitutional Development website  
<<http://www.justice.gov.za/trc/amntrans%5C2000/201212db.htm>>

Figure 1: Distribution of VPOs by Size



Measuring an organization’s size is also made difficult by discrepancies that often exist between reports of a group’s size and its actual size. Estimates of an organization’s strength likely vary by source, as rebels may be more likely to over-exaggerate their capabilities while governments may underestimate them. As such, any continuous measure of size is likely to be plagued by significant measurement error. In order to address the uncertainty regarding estimates of VPOs’ sizes and deal with outliers or potentially influential observations, we first code organization size as an ordinal variable. As noted above, the IFP is purported to have had about two million members. Although multiple sources report the same estimate, it is unclear that the organization is actually this large and even if it is, whether the estimate accurately reflects the organization’s operational capacity. Nevertheless, we do know that the organization is *very large*. Ordinalizing the measure allows us to account for the IFP’s very large size without introducing such potential measurement error into our analyses. Further, as most groups do not even come close to 2,000,000 troops, the IFP is an outlier and has the capacity to wield significant influence over our results.

We use a three-point ordinal measure rather than a raw troop count to minimize this bias. The median estimate of group size is used to construct this measure, assigning a “1” to groups with fewer than 1000 troops, a “2” to groups with between 1,000 and 10,000 forces and a “3” to groups with greater than 10,000 members. Next, we further truncate this variable into a binary indicator, *Small*, to indicate groups with median sizes between 2 and 999 members. We chose this cutoff to include as small only groups in the smallest 25% of the estimation sample. In the absence of quantitative estimates, we also considered qualitative information when it allowed us to make a

determination about whether an organization was small or otherwise. Using such information enabled us to retain more observations to be used in our statistical analyses. Dichotomizing the size variable helps address high collinearity between organization size and other variables, including those measuring terrorism and secessionism. Although groups practicing terrorism can range in size, those specializing in terrorism tend to be weak (Crenshaw 2001). Secessionist movements also tend to be small as they fail to gather the momentum of more populist movements (Buhaug 2006).

High order multicollinearity between these variables is likely to be problematic especially when considering women in combat roles, as there is likely a lot of shared variance between these theoretically distinct and important variables. Such collinearity can cause inflated standard errors and wide confidence bands resulting in insignificant coefficient estimates. We examined the uncentered variance inflation factor (VIF) to test whether the aforementioned measures exhibited high collinearity. In Model 6 the uncentered VIF of the ordinal group size measure is 5.99 whereas it was only 1.68 for the binary measure, *Small*. As smaller VIFs suggest less collinearity between covariates, we choose to utilize the dichotomous measure in our main statistical models. Table 8 displays results of fully specified models, using the ordinal size measure, while Table 9 as well as models examining an alternate dichotomous measure of size where a small group is operationalized as one with fewer than 500 members.

### *Terrorist VPO*

We hypothesize that organizations utilizing terrorist tactics will be more likely to include women members. We code a VPO as a *Terrorist* group when the organization is listed as a perpetrator in the Global Terrorism Database (GTD) or if other evidence of an organization's use of terrorism is found.<sup>10</sup> Table 5 displays both the number and percentage of groups using terrorism in and outside the context of civil conflict. About 57% of the VPOs in the sample are reported as having employed terrorism. Thirty percent of these groups do so in the context of a domestic conflict, while 26.5% use terrorism outside the context of a reciprocated conflict with a government. Approximately 55% of the groups in the sample are engaged in rebellion against the state. Forty-five percent of these rebels never use terrorism.

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<sup>10</sup> Coding groups not listed in GTD is necessary as the database only covers attacks between 1970 and 2012.



<b>Table 5: Percent of VPOs coded as Rebel and Terrorist Organizations</b>	
<b>All VPO's</b>	166
<b>All Rebels</b>	91 (54.8%)
<b>All Terrorist Groups</b>	94 (56.6%)
<b>Terrorist; Rebel</b>	50 (30.0%)
<b>Terrorist; No Rebel</b>	44 (26.5%)
<b>Rebel; No Terrorist</b>	41 (24.7%)

### Positive Gender Ideology

Organizations that hold positive ideas about women should be more likely to garner interest from female potential participants. These types of organizations should also be more likely to extend opportunities for women to join, as they are likely to be less sensitive to potential difficulties incorporating women members may introduce. This is what we aim to test. We look for evidence that an organization has institutionalized policies, ideals or aims regarding women, women's roles within organizations, and/or their place in society. As some groups institutionalize negative ideas regarding women, we specifically code whether the organization's gender ideology is positive. Twenty-two VPOs in our sample are coded as having positive gender ideologies. Below, we provide representative examples of the type of evidence used to code organizations' gender ideologies.

The Congolese National Liberation Front (FLNC) was coded as having a positive gender ideology as their stated aims were "*to realize equality between man and woman*" (FLNC Political Programme 1977:14). Among the Sahrawi People's Liberation Army's (Polisario) goals were "*To guarantee political and social rights to women and to open the way to women's development,*" demonstrating that they had clear ideals regarding women's position in society (Lippert 1992, 639). The Oromo Liberation Front (OLF) in Ethiopia announced several goals regarding women's equality in its 1988 political programme including "*To ensure the political, economic and cultural equality of women with men... To ensure that women are fully paid during maternity leave... To enable women to organise themselves in order to protect their rights... To remove laws and culture discriminating against women and replace them with non-discriminatory ones.*"<sup>11</sup> Finally, the ONLF's 1984 Political Program states the following: "*Recognizing that women in particular have been under represented in public life... Realizing that without the active participation of women in our struggle for national self-determination and reconstruction we will not be able to fully implement our people's aspiration... The Ogaden National*

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<sup>11</sup> "Political Programme Of The Oromo Liberation Front. " *BBC Summary of World Broadcasts*. July 18, 1988.

*Liberation Front (ONLF) affirms that we shall not discriminate based on gender in the administration of our organization and that we shall actively seek out and recruit women to take their rightful place in our struggle for national self-determination” (ONLF 1984).*

Organizations with positive gender ideologies are quite varied. Fifteen organizations are listed as perpetrators of terrorism, two are involved in protracted civil wars with their governments, eight have aims for secession, two are listed as Islamic fundamentalist organizations and two are listed as self-defense or paramilitary organizations.

### Competition

To test the effect that competition between organizations has on women’s participation in VPOs, we count as competitors all other violent organizations that can be considered as having the same enemy as the group in question in a state. The resulting variable, *Competition*, is a count variable ranging from 0 to 15 with a mean of approximately four competitors. For a paramilitary group, the number of other paramilitary or self-defense organizations operating in the state would be coded as competitors. When organizations are coded as rebel or terrorist groups, the number of other organizations that consider the state their primary enemy would represent the amount of competition the organization faces. We tested an alternate measure examining all other violent groups in the state regardless of their enemy. In other words, we counted for each group, the total number of other VPOs operating within the state, but the results did not vary. In the main statistical models, we utilize a measure of competition, coded in the organizations midyear. We re-measure this variable to capture the degree of competition in the organization’s start year, but the results did not vary so are not reported. We dichotomized the variable to distinguish groups facing high competition from organizations in environments of low competition and as the results remained the same they are also not reported.

### Forced Recruitment

We measure each organization’s recruiting strategy. The dichotomous variable, *Forced Recruitment*, takes on a value of “1” when evidence that an organization adopts a policy of conscription exists, and “0” when organizations rely on only voluntarily recruitment.<sup>12</sup> We code an organization as using compulsory recruitment even if some subset of its membership is made up of willing participants or volunteers. Information on conscription was collected using the same types of sources listed above

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<sup>12</sup> This measure does not reflect whether women, in particular, are forcefully recruited because we did not want to build women’s participation into the measure. Doing so would lead to perfect prediction as by definition women would have to be participants in VPOs if they are forcefully recruited.

(ie. historical accounts, human rights reports, news articles). The Independent National Patriotic Front of Liberia (INPFL), for example, is a VPO coded as utilizing a forced based recruitment strategy. The following excerpt was used to generate this coding: *"The General forced him to take up a gun and asked him "to choose between life and death." He felt he had no other option. Another combatant described how the INPFL forcibly recruited him"* (Lang et al. 2009:113). Similar reports were found suggesting the Coalition of Congolese Patriotic Resistance (PARECO) and National Congress for the Defense of the Congolese People (CNDP) also had forceful recruitment strategies. A 2008 report written by the Rwanda News Agency wrote *"Forced recruitment has increased in the last few months as parties, particularly the CNDP and the local militia PARECO, try to make up for combatants killed in battle...Anthony was one of an estimated 50 children and dozens of adults forcibly recruited in mid-September by the rival forces, CNDP and PARECO, just outside the displaced persons camp in Ngungu (Masisi territory)."* A detailed account of the CNDP's recruitment process was provided by the above named individual. He wrote *"They sent me with a large group of other men and boys - some as young as 12, others as old as 40 - to Murambi where they said we would transport boxes of ammunition for the rebel soldiers. They beat us badly so we couldn't resist. When we got to Murambi, they didn't order us to transport boxes, but instead gave us military uniforms and taught us how to use weapons. Then after three days, they put us all in an underground prison. We stayed there for four days, and new recruits joined us everyday. On the fourth day, they called us out of the prison and took us to Karuba. That night, I managed to escape with two other recruits, and we ran all the way back to Ngungu. The others who remained behind were sent to Kitchanga for military training."*<sup>13</sup>

Of the 159 VPOs where information on recruitment could be found, 39 (25%) of the organizations utilized forceful recruiting strategies.

The remaining control variables are described in Table 6.

<b>Variable Name</b>	<b>Concept</b>	<b>Measurement</b>	<b>Source</b>
<b>Secessionist</b>	Measures whether an organization demands self-determination from the state	Binary Indicator taking on a value of "1" when organizations announce aims for an independent state, self-determination (or the right for self rule), or for separation from the	Original coding

<sup>13</sup> "War, Rape, forced conscription: Congo victims cry for Help." Rwanda News Agency. December 5, 2008. Accessed at [http://www.rnanews.com/index.php?option=com\\_content&task=view&id=684](http://www.rnanews.com/index.php?option=com_content&task=view&id=684)

		state; zero otherwise.	
<b>Self-Defense/Paramilitary</b>	Captures whether a VPOs primary purpose was to combat other violent non-state actors	Binary indicator coded “1” if a VPO aims to defend part of the population, such as an ethnic or religious group, from other violent actors. Coded as paramilitary organizations are those VPOs that act unofficially as military agents of the state.	Original coding
<b>Fundamentalist</b>	Gauges whether an organization espouses an Islamist, Islamic fundamentalist or Radical Islamic ideology.	Fundamentalist is a dichotomous measure coded “1” when organizations announce as their main aims, the intention to create Islamic governments/states or introduce Islamic laws within a state; zero otherwise.	Original coding
<b>Women in State Military</b>	Measures whether women are present in the armed forces at the country-level.	A binary indicator measuring whether the state utilizes women as active agents in the military forces. We code whether women are combatants in the state military in the organization’s midyear.*	Original coding
<b>CEDAW Ratification</b>	Codes whether the state was a ratifier of the CEDAW Treaty	A dichotomous indicator coded “1” if the state ratified the <i>Convention to Elimination All Forms of Discrimination Against Women</i> by the organization’s midyear; zero otherwise.*	The list of state parties and the dates of ratification can be found on the United Nations Entity for Gender Equality and the Empowerment of Women website <a href="http://www.un.org/womenwatch/daw/cedaw/states.htm">http://www.un.org/womenwatch/daw/cedaw/states.htm</a>
<b>Women’s Political Rights</b>	Captures the level of political Rights women are afforded by the state	This three-point measure is coded “0” if women’s rights are restricted by law, “1” if gender equality in politics is guaranteed by law but not in practice, “2” if political equality is guaranteed by law but participation is not equal in practice, and “3” if political equality is both guaranteed by law and practiced. This variable is coded in the organization’s midyear.*	Cingranelli & Richards 2013
<b>Physical</b>	Measures the level	Ordinal measure capturing	Cingranelli &

<b>Integrity Rights</b>	of respect the government has for citizen's human rights, physical integrity rights in particular	whether the state respects individual's "rights not to be tortured, extrajudicially killed, disappeared, or imprisoned for political beliefs" (Cingranelli & Richards 2010, 397). Index ranging from 0-8, with "0" corresponding to no respect and "8" corresponding to full respect for individual's physical integrity rights.*	Richards 2013
*Measures of <i>Women in the State Military</i> , <i>CEDAW</i> , <i>Women's Political Rights</i> and <i>Physical Integrity Rights</i> were also coded for each organization's start year. The results did not vary significantly.			

### Section III. Eritrea.

Table 7 shows how our illustrative cases compare with the other cases in the data. The first column displays the average value for each covariate. The remaining columns show the values for the EPLF and ELF, respectively. As Eritrea was part of the Ethiopian state, the ELF and EPLF's competition includes all other Eritrean and Ethiopian groups fighting against the Ethiopian government in the middle most year of the organization's existence. The EPLF's midyear was 1981 while ELF's midyear was 1970. Data are missing on CEDAW and CIRI variables for ELF because CEDAW only went into effect in 1981 while the CIRI dataset starts in 1981.

<i>Variable Name</i>	<b>Average</b>	<b>EPLF</b>	<b>ELF</b>
<b>Terrorist</b>	1	1	1
<b>Small</b>	0	0	0
<b>Gender Ideology</b>	0	1	1
<b>Competition</b>	4	9	1
<b>Self-Defense/Paramilitary</b>	0	0	0
<b>Fundamentalist/Islamist</b>	0	0	1
<b>Secessionist</b>	0	1	1
<b>Women in State Military</b>	1	1	1
<b>Women's Political Rights</b>	2	1	.
<b>Physical Integrity Rights</b>	2	0	.
<b>CEDAW Ratification</b>	0	1	0
<b>Forced Recruitment</b>	0	1	0

#### **Section IV. Additional Models and Robustness Checks**

This section contains additional analyses that demonstrate the robustness of our statistical results. Tables 8 and 9 demonstrate that our results are robust to the specification of organization size. Table 10 shows that even after excluding cases where fewer than 3 distinct sources are located, our results obtain. Tables 11 and 12 display bivariate probit models examining the determinants of women's participation given the possibility that decisions to include women may be related to decisions to forcefully recruit. These models are specified to control for covariates that might explain both outcomes. By comparing the base models (Model 17 and Model 19) that are specified identically to the main models in the manuscript, we see that our results remain consistent.

**Table 8: Logistic Regression Models Examining the Determinants of Women’s Participation in Any Role in Violent Organizations- *Alternate Size Measurements***

	<b>Model 9</b>	<b>Model 10</b>	<b>Model 11</b>
<b>Terrorist</b>	0.6796	0.8058	1.2201
	0.35	0.46	0.43
	0.05	0.08	0.00
<b>Gender Ideology</b>	3.0364	3.4069	3.0783
	0.85	0.71	0.78
	0.00	0.00	0.00
<b>Competition</b>	-0.03582	-0.04902	-0.07398
	0.08	0.09	0.11
	0.67	0.58	0.51
<i>Size Measurements</i>			
<b>Ordinal Size –Five Category</b>	0.3921		
	0.20		
	0.05		
<b>Ordinal Size- Three Category</b>		1.5904	
		0.48	
		0.00	
<b>Small (fewer than 500/lowest 20% of data)</b>			-1.8607
			0.79
			0.02
<b>Women in State Military</b>	-0.3756	-0.5218	-0.01102
	0.30	0.41	0.58
	0.21	0.20	0.98
<b>Women’s Political Rights</b>	0.4867	0.6730	0.6326
	0.53	0.68	0.84
	0.36	0.32	0.45
<b>Physical Integrity Rights</b>	-0.2484	-0.1959	-0.2906
	0.21	0.20	0.22
	0.24	0.34	0.19
<b>CEDAW Ratification</b>	-0.06041	0.1618	-0.2194
	0.48	0.47	0.51
	0.90	0.73	0.67
<b>Constant</b>	-1.8072	-4.1389	-0.6498
	1.84	2.38	2.17
<b>Observations</b>	103	102	96

Coefficients, robust standard errors clustered on country and p-values are presented in the first, second and third rows, respectively.

**Table 9: Logistic Regression Models Examining the Determinants of Women’s Participation in Any Role in Violent Organizations- *Alternate Size Measurements***

	<b>Model 12</b>	<b>Model 13</b>	<b>Model 14</b>
<b>Terrorist</b>	0.8692	0.9761	1.1926
	0.46	0.54	0.53
	0.06	0.07	0.02
<b>Gender Ideology</b>	2.7406	2.8739	2.8140
	0.86	0.84	0.85
	0.00	0.00	0.00
<b>Competition</b>	-0.04968	-0.06013	-0.04701
	0.12	0.11	0.13
	0.69	0.59	0.71
<i>Size Measurements</i>			
<b>Ordinal Size –Five Category</b>	0.4039		
	0.18		
	0.02		
<b>Ordinal Size- Three Category</b>		1.5748	
		0.50	
		0.00	
<b>Small (fewer than 500/ lowest 20% of data)</b>			-1.9300
			1.09
			0.08
<b>Women in State Military</b>	-0.4156	-0.3989	0.05860
	0.44	0.48	0.71
	0.34	0.41	0.93
<b>Women’s Political Rights</b>	-0.1530	0.1187	0.004945
	0.61	0.84	0.95
	0.80	0.89	1.00
<b>Physical Integrity Rights</b>	-0.2281	-0.1648	-0.2608
	0.24	0.21	0.23
	0.34	0.44	0.25
<b>CEDAW Ratification</b>	0.6731	0.9172	0.5194
	0.67	0.60	0.67
	0.32	0.13	0.44
<b>Constant</b>	-2.1947	-4.8802	-1.1794
	1.77	2.97	2.48
<b>Observations</b>	97	96	89

Coefficients, robust standard errors clustered on country and p-values are presented in the first, second and third rows, respectively.



**Table 10: Logistic Regression Models Examining the Determinants of Women’s Participation in Violent Political Organizations**

*Including only cases where at least three distinct sources indicate women’s participation*

	<b>Model 15 Base Models</b>	<b>Model 16 Full Model</b>
<i>Main Explanatory Variables</i>		
<b>Terrorist</b>	1.3473	1.1388
	0.49	0.46
	0.01	0.01
<b>Small</b>	-2.1980	-1.9898
	0.51	0.61
	0.00	0.00
<b>Gender Ideology</b>	1.2699	0.8444
	0.67	0.51
	0.06	0.10
<b>Competition</b>	-0.08999	-0.04634
	0.07	0.07
	0.18	0.53
<b>Constant</b>	-0.3625	-1.0330
	0.49	0.63
	0.46	0.10
<b>Observations</b>	130	126

Coefficients, robust standard errors clustered on country and p-values are presented in the first, second and third rows, respectively.

**Table 11: Bivariate Probit Regression Models Examining the Determinants of Women's Participation in Any Roles and Forced Recruitment**

	Model 17		Model 18	
	Women Participants	Forced Recruitment	Women Participants	Forced Recruitment
<i>Explanatory Variables</i>				
<b>Terrorist</b>	0.7083	0.4011	0.5297	0.2849
	0.23	0.23	0.26	0.35
	0.00	0.08	0.04	0.42
<b>Small</b>	-0.8772	-0.9063	-0.8172	-1.1593
	0.27	0.25	0.31	0.39
	0.00	0.00	0.01	0.00
<b>Gender Ideology</b>	0.6901	-0.4277	1.6278	-0.2964
	0.32	0.27	0.43	0.64
	0.03	0.12	0.00	0.64
<b>Competition</b>	-0.03726	-0.03946	-0.06324	-0.1306
	0.03	0.05	0.04	0.05
	0.19	0.43	0.08	0.01
<b>Domestic Conflict</b>			0.7455	1.5349
			0.68	0.51
			0.28	0.00
<b>Self-Defense/Paramilitary</b>			0.2640	1.7732
			0.63	0.58
			0.67	0.00
<b>Physical Integrity Rights</b>			-0.1987	-0.2844
			0.11	0.15
			0.07	0.06
<b>Constant</b>	-0.09405	-0.4415	-0.2556	-1.1100
	0.30	0.28	0.58	0.31
	0.75	0.11	0.66	0.00
<b>ρ</b>	0.4646		0.6994	
	0.16		0.15	
	0.00		0.00	
<b>Observations</b>	141		100	

Coefficients, robust standard errors clustered on country and p-values are presented in the first, second and third rows, respectively.

**Table 12: Bivariate Probit Regression Models Examining the Determinants of Women's Participation in Combat Roles and Forced Recruitment**

<i>Explanatory Variables</i>	Model 19		Model 20	
	Women Combatants	Forced Recruitment	Women Combatants	Forced Recruitment
<b>Terrorist</b>	0.5595	0.4714	0.5200	0.3775
	0.29	0.25	0.30	0.37
	0.06	0.06	0.08	0.30
<b>Small</b>	-0.9081	-0.9036	-0.8349	-1.1502
	0.29	0.22	0.39	0.36
	0.00	0.00	0.03	0.00
<b>Gender Ideology</b>	0.3830	-0.4135	1.6847	-0.2759
	0.35	0.31	0.53	0.77
	0.28	0.19	0.00	0.72
<b>Competition</b>	-0.03224	-0.05326	-0.02481	-0.1435
	0.03	0.05	0.05	0.06
	0.36	0.29	0.65	0.01
<b>Domestic Conflict</b>			-0.01607	1.7678
			0.51	0.63
			0.97	0.00
<b>Self-Defense/Paramilitary</b>			0.2316	1.8857
			0.48	0.76
			0.63	0.01
<b>Physical Integrity Rights</b>			-0.09141	-0.3119
			0.09	0.17
			0.32	0.06
<b>Constant</b>	-0.4845	-0.4363	-0.6245	-1.2262
	0.40	0.29	0.54	0.30
	0.22	0.13	0.25	0.00
<b>p</b>	0.3199		0.4431	
	0.18		0.19	
	0.08		0.02	
<b>Observations</b>	133		94	

Coefficients, robust standard errors clustered on country and p-values are presented in the first, second and third rows, respectively.

Section V: Additional Descriptive Tables

<b>Table 13: Summary Statistics</b>				
<i>Variable Name</i>	<b>Number of Observations</b>	<b>Mean</b>	<b>Min</b>	<b>Max</b>
<b>Women Participants</b>	161	.4534161	0	1
<b>Women in Combat Roles</b>	154	.2922078	0	1
<b>Terrorist</b>	166	.5662651	0	1
<b>Small</b>	153	.2875817	0	1
<b>Gender Ideology</b>	166	.1325301	0	1
<b>Competition</b>	161	3.906832	0	15
<b>Overthrow Government</b>	166	.5481928	0	1
<b>Self-Defense/Paramilitary</b>	166	.253012	0	1
<b>Fundamentalist/Islamist</b>	166	.1325301	0	1
<b>Secessionist</b>	166	.3072289	0	1
<b>Women in State Military</b>	165	.7272727	0	1
<b>Women's Political Rights</b>	115	1.582609	0	3
<b>Physical Integrity Rights</b>	115	2.104348	0	7
<b>CEDAW Ratification</b>	145	.439759	0	1
<b>Forced Recruitment</b>	159	.245283	0	1

**Table 14: List of Countries and VPO's Included in Sample**

<b>Country</b>	<b>Group Name</b>
Algeria	Al-Qaeda Organization in the Islamic Maghreb (AQIM)
Algeria	Armed Islamic Group (GIA)
Algeria	Armed Islamic Movement (MIA)
Algeria	Islamic Salvation Army (AIS)/ Islamic Salvation Front (FIS)
Algeria	Jihad Islamic League Front (LIDD)
Algeria	Mouvement National Algerien (MNA)
Algeria	Movement of the Islamic State (MEI)
Algeria	National Liberation Front (FLN)/ (ALN)
Algeria	Salafi Daawa Group/Dhamat Houmet Daawa Salafia (DHDS)
Algeria	Salafist Group for Preaching and Combat (GSPC)
Algeria	Takfir wa'l Hijra
Angola	Front for the Liberation of the Cabinda Enclave (FLEC)
Angola	National Front for the Liberation of Angola (FNLA)
Angola	National Union for the Total Independence of Angola (UNITA)
Angola	Popular Movement for the Liberation of Angola (MPLA)
Cote d'Ivoire	Federation of Students and Scholars of Cote d'Ivoire (FESCI)
Cote d'Ivoire	Group of Patriots for Peace (GPP)/CPP/FLN
Cote d'Ivoire	Ivorian Popular Movement for the Great West (MPIGO)
Cote d'Ivoire	Movement for the Liberation of Western Ivory Coast (MILOCI)
Cote d'Ivoire	Movement for Justice and Peace (MJP)
Cote d'Ivoire	New Forces/ FRCI/FNCI
Cote d'Ivoire	Patriotic Movement of Cote d'Ivoire (MPCI)
Djibouti	Front for Restoration of Unity and Democracy (FRUD)
Dem. Rep. Congo	Alliance of Democratic Forces for the Liberation of Congo- Zaire (AFDL)
Dem. Rep. Congo	Alliance of Democratic Forces/National Army for the Liberation of Uganda (ADF)
Dem. Rep. Congo	Army for the Liberation of Rwanda (ALiR)
Dem. Rep. Congo	Bangadi Militia
Dem. Rep. Congo	Coalition of Congolese Patriotic Resistance (PARECO)
Dem. Rep. Congo	Congolese Defence Force (FDC)
Dem. Rep. Congo	Congolese Liberation Party (PLC)
Dem. Rep. Congo	Congolese National Liberation Front (FLNC)
Dem. Rep. Congo	Congolese National Movement- Lumumba (MNCL)
Dem. Rep. Congo	Congolese Rally for Democracy-Liberation Movement (RCD-ML/ RCD-K)
Dem. Rep. Congo	Democratic Front for the Liberation of Rwanda (FDLR)/FOCA
Dem. Rep. Congo	Enyele/Independent Movement of Liberation and Allies (MILIA)
Dem. Rep. Congo	Armed Forces of the Congolese People (FAPC)
Dem. Rep. Congo	Farmers Mutual Society of Virunga (MAGRIVI)
Dem. Rep. Congo	Mai-Mai (Mayi-Mayi) Militia
Dem. Rep. Congo	Congolese Revolutionary Movement (MRC)
Dem. Rep. Congo	Movement for the Liberation of Congo (MLC)

Dem. Rep. Congo	National Congress for the Defense of the Congolese People (CNDP)
Dem. Rep. Congo	National Liberation Council (CNL)/Popular Liberation Army (PLA)
Dem. Rep. Congo	Nationalist and Integrationist Front (FNI)
Dem. Rep. Congo	Party for Unity and Safeguarding of the Integrity of Congo (PUSIC)
Dem. Rep. Congo	Patriotic Force of Resistance in Ituri (FRPI)
Dem. Rep. Congo	Patriotic Forces for the Liberation of the Congo (FPLC)
Dem. Rep. Congo	Popular Front for Justice in Congo (FPJC)
Dem. Rep. Congo	Rally for Congolese Democracy (RCD/RCD-Goma)
Dem. Rep. Congo	Rastas
Dem. Rep. Congo	Federalist Republican Forces (FRF)
Dem. Rep. Congo	Union of Congolese Patriots (UPC)
Eritrea	Democratic Movement for the Liberation of Eritrea Kunama (DMLEK)
Eritrea	Eritrean National Salvation Front (ENSF)/Dhnet/Inqaz
Eritrea	National Democratic Front for the Liberation of Eritrean Saho (NDFLES)
Eritrea	Red Sea Afar Democratic Organization (RSADO)
Ethiopia	Afar Liberation Front (ALF)
Ethiopia	Afar Revolutionary Democratic Unity Front (ARDUF)/UGUUGUMO
Ethiopia	Al-Ittihaad al-Islami (AIAI)
Ethiopia	Beni Shangul Liberation Front (BLF)
Ethiopia	Eritrean Liberation Front (ELF)
Ethiopia	Eritrean People's Liberation Front (EPLF)
Ethiopia	Ethiopian Democratic Union (EDU)
Ethiopia	Ethiopian People's Democratic Movement (EPDM)
Ethiopia	Ethiopian People's Revolutionary Democratic Front (EPRDF)
Ethiopia	Ethiopian People's Revolutionary Party/Army (EPRP)
Ethiopia	Gambella People's Liberation Movement (GPLM)/Force
Ethiopia	Islamic Front for the Liberation of Oromia (IFLO)
Ethiopia	Issa and Gurgura Liberation Front (IGLF)
Ethiopia	Ogaden Liberation Front
Ethiopia	Ogaden National Liberation Front (ONLF)
Ethiopia	Oromo Liberation Front (OLF)
Ethiopia	Sidama Liberation Front (SLF)
Ethiopia	Somali Abo Liberation Front
Ethiopia	Tigray Peoples Liberation Front (TPLF)
Ethiopia	Western Somali Liberation Front (WSLF)
Ethiopia	Democratic Movement for the Liberation of Eritrea (DMLE)
Ethiopia	Eritrea Islamic Jihad Movement (EIJM)
Gambia	Green Boys
Liberia	INPFL (Independent National Patriotic Front of Liberia)
Liberia	LDF (Lofa Defence Force)
Liberia	Liberia Peace Council (LPC)
Liberia	Liberians United for Reconciliation and Democracy
Liberia	Movement for Democracy in Liberia (MODEL)

Liberia	National Patriotic Front of Liberia (NPFL)
Liberia	Nimba Redemption Council
Liberia	United Liberation Movement for Democracy in Liberia- Johnson (ULIMO – J)
Liberia	United Liberation Movement for Democracy in Liberia- Kromah (ULIMO-K)
Liberia	United Liberation Movement of Liberia for Democracy (ULIMO)
Mali	Revolutionary Army for the Liberation of Azaouad (ARLA)
Mali	North Mali Tuareg Alliance for Change (ATNMC)
Mali	Democratic Alliance for Change (ADC)
Mali	Popular Liberation Front of Azawad (FPLA)
Mali	Islamic Arab Front of Azawad (FIAA)
Mali	Patriotic Movement of Ganda Koi (MPGK)
Mali	Azawad People's Movement (MPA)/MPLA
Mali	Movement for Jihad and Unity (MUJAO)
Mali	Movement for the Liberation of Azawad/ Tanekra
Morocco	Patriotic Moroccan Front (FPM)
Morocco	Moroccan Islamic Combatant Group (GICM)
Morocco	National Liberation Army (NLA/ ALN)
Morocco	Salafia Jihadia/Jihad for Pure Islam
Morocco	Shabiba Islamiya/Moroccan Islamic Youth Movement (Association)
Morocco	Polisario Front/ Sahrawi People's Liberation Army (SPLA)
Mozambique	Mozambique Liberation Front (FRELIMO)
Mozambique	Mozambican National Resistance (RENAMO)
Niger	Democratic Revolutionary Front/Democratic Front for Renewal (FDR)
Niger	Liberation Front of Air and Azawad (FLAA)
Niger	Nigerien's Movement for Justice (MNJ)
Niger	Popular Front for the Liberation of Niger (FPLN)
Niger	Union of the Armed Resistance Forces (UFRA)
Senegal	Movement of Democratic Forces of Casamance (MFDC)
Sierra Leone	Armed Forces Revolutionary Council (AFRC)
Sierra Leone	Kamajors /Civil Defense Force
Sierra Leone	Revolutionary United Front (RUF)
Sierra Leone	West Side Boys (WSB)
Somalia/Ethiopia	Al-Shabaab
South Africa	African National Congress (ANC)/ Umkhonto we Sizwe (MK)
South Africa	Afrikaner Resistance Movement /Afrikaner Weerstandsbeweging (AWB)
South Africa	Azania People's Organization (AZAPO)/Black Consciousness Movement of Azania/Azaniar
South Africa	National Liberation Army
South Africa	Boer Republikeinse Leer/Afrikaner Republican League
South Africa	Boere Aanvals Troepe (BAT)/boer attack force
South Africa	Civil Cooperation Bureau (CCB)
South Africa	Inkatha Freedom Party (IFP)
South Africa	Lesotho Liberation Army (LLA)
South Africa	Orde Boerevolk/Order of the Afrikaans Nation

South Africa	Pan Africanist Congress (PAC)/Azanian People's Liberation Army (APLA)
South Africa	People Against Gangsterism and Drugs (PAGAD)
South Africa	South West Africa People's Organization (SWAPO)/ Peoples' Liberation Army of Namibia
South Africa	White Liberation Army/Movement
South Africa	White Wolf
South Africa	Wit Kommando
South Africa	Youth for Revolution
South Africa	Zulu Miners
South Sudan	South Sudan Democratic Movement/Army (SSDM)
South Sudan	South Sudan Liberation Army
Sudan	Anya Nya (Snake Venom)
Sudan	Anya Nya II/SSLM
Sudan	Beja Congress
Sudan	Islamic Charter Front
Sudan	Janjaweed
Sudan	Justice and Equality Movement (JEM)
Sudan	Kush Liberation Front (KLF)
Sudan	Liberation and Justice Movement (LJM)
Sudan	National Democratic Alliance (NDA)
Sudan	National Islamic Front (NIF)
Sudan	National Redemption Front (NRF)
Sudan	Popular Defense Forces
Sudan	Sudan Liberation Army- Unity (SLA Unity)
Sudan	South Sudan Defense Forces/SPLM-Nasir
Sudan	South Sudan Unity Movement
Sudan	Southern Sudan Independence Movement (SSIM)
Sudan	Sudan Liberation Army (SLM/A)
Sudan	Sudan Liberation Army -Abdel Wahid Mohammed Nur faction (SLA-AW)/SLA-WN
Sudan	Sudan Liberation Army- Minni Minawi faction (SLA-MM)
Sudan	Sudan People's Liberation Army-North Faction (SPLA-North)
Sudan	Sudan Revolutionary Front (SRF)
Sudan	Sudanese Alliance Forces (SAF)/ Sudan National Alliances (SNA)
Sudan	Sudanese Communist Party (SCP)
Sudan	Sudanese National Front (SNF)
Sudan	Sudanese People's Liberation Movement /Army (SPLM/A)
Sudan	Umma Liberation Army (ULA)
Sudan	White Army
Uganda	Amuka Militia/Rhino Militia
Uganda	Lord's Resistance Army (LRA)
Uganda	National Resistance Movement/Army (NRA)
Uganda	Uganda National Liberation Army (UNLA)

\*Only English names are listed in most cases



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