

Magical Practices and the Recruitment of Women into Rebel Groups

Abstract:

Magical practices play a central role in the indoctrination and socialization processes of many rebel organizations. Qualitative scholarship has examined the central role that women play as practitioners of magic in some of these organizations. Specifically, some women are believed to have the powers to perform various rituals that help protect recipients, as well as enhance their fighting capabilities. Thus, groups that practice magic often incorporate women into logistical support roles because of the unique abilities that women are believed to possess in facilitating the use of magic. However, despite the prominent relationship between magical practices and the incorporation of women that has been observed in various rebel groups, the burgeoning quantitative literature on the recruitment of women into armed movements has largely overlooked this association. To remedy this, we combine data on the magical practices of rebel organizations and their recruitment of women into logistical support roles to better understand this association. We find fairly strong evidence of a positive association between the use of magical practices and the recruitment of women into logistical support roles in rebel organizations. We conduct subsequent analysis to investigate the association between magical practices and women's participation in other roles in militant groups.

Women play a central role in the magical and spiritual practices of rebel groups. These practices serve a variety of functions for militant organizations. For instance, female practitioners of magic are believed to help protect rebels on the battlefield. Jonas Savimbi, the leader of the União Nacional para a Independência Total de Angola (UNITA), fought with a woman whose magic he allegedly believed would make him immune from harm on the battlefield (Pullella 2009). In the Civil Defense Forces in Sierra Leone, female herbalists provided combatants with magic potions believed to make them invulnerable (Mazurana and Carlson 2004).

Female practitioners of magic have also used their perceived powers for other purposes as well, including to indoctrinate recruits. In Senegal, for example, priestesses working with the Mouvement des forces démocratiques de Casamance (MFDC) helped create shrines at which recruits would pledge their loyalty and pray for success. Recruits also had to take a mystical oath upon joining and were told that if they tried to leave the group without the priestesses undoing the oath, they would fall ill or die (Stam 2009).

Indeed, Loken (2022) explains that one of the logistical support roles that rebel organizations have recruited women for is to serve as facilitators of magical practices and rituals. In this context, the term logistical support role references “internally facing work maintaining rebel organizations’ militant apparatus and denotes activities critical to carrying out successful, individual attacks” (Loken 2022, p. 145). Logistical support roles include a variety of functions such as attack planners, cooks, porters, radio operators, and spiritual mediums and magical practitioners, among a variety of other tasks.

However, despite the important role women play in facilitating magical practices in many militant organizations, there has been a lack of systematic, cross-group quantitative analysis examining the relationship between rebel groups’ magical practices and their incorporation of

women. This has made it difficult to determine the generalizability of anecdotal examples of the relationship between magical practices and the incorporation of women in armed movements. Furthermore, researchers conducting quantitative research on the recruitment of women into rebel movements could be omitting an important variable from their analysis that helps explain variation in their prevalence across militant groups.

To remedy this, we employ novel data on the magical practices and beliefs of rebel organizations to investigate how these dynamics affect the recruitment of women into rebel groups. Specifically, we expect that armed groups that employ magical practices, such as the use of protective amulets and rituals, are more likely to recruit women into logistical support roles because of the central role that women play in facilitating these practices in the broader societies in which these organizations operate. Combining data from the Magical Acts by Groups in Civil Conflicts (MAGICC) dataset (Soules and Avdan 2024) and Women's Activities in Armed Rebellion (WAAR) dataset (Loken and Matfess 2024a), we find consistent evidence of a strong, positive association between rebel groups' use of magical practices and their recruitment of women into logistical support roles.

Our quantitative analysis focuses exclusively on Africa. This is for two primary reasons. Empirically, while the MAGICC dataset covers only groups in Africa (Soules and Avdan 2024), it is the only cross-rebel group dataset on magical practices that exists, to the best of our knowledge. Theoretically, we build off research which focuses on the role of women as practitioners of magic in traditional African religions (e.g., Ebere 2011; Grillo 2018; Kilson 1976; Oriola 2012; Oriola et al. 2013). Thus, an African specific analysis most directly engages with this literature.

We hope to make at least three contributions with this research note. First, we contribute the burgeoning *quantitative* literature that examines a variety of factors driving the recruitment of women into rebel movements. These factors include tactical needs (Dalton and Asal 2011; Thomas 2021; Thomas and Bond 2015), societal-level gender equality (Thomas and Wood 2018), and rebel group ideology (Henshaw 2016a; Wood and Thomas 2017). Particularly relevant to our paper is the fact that radical Islamist rebel groups are less likely to recruit women than other types of militant organizations (Henshaw 2016a; Wood and Thomas 2017). In contrast, our findings show that certain spiritual beliefs actually *facilitate* the recruitment of women into armed groups. Said differently, our results show the need to consider how other forms of spirituality and religion affect women's participation in political violence, not just radical Islamist ideologies.

Second, we contribute to a small quantitative literature that examines the effects of rebel groups employing magical practices. This scholarship focuses primarily on the association between magical practices and the recruitment of children (Beber and Blattman 2013; Soules and Avdan 2024). Our results show that magical practices are associated with other dimensions of rebel groups' recruitment strategies as well. Third, while there are some quantitative studies that investigate the causes and consequences of the recruitment of women into non-combat roles (e.g., Harrell 2023; Henshaw 2016a; Loken and Matfess 2024a; Thomas and Bond 2015), much more of the quantitative literature tends to focus on women in combat roles (e.g., Braithwaite and Ruiz 2020; Brannon et al. 2024; Goldberg 2024; Manekin and Wood 2020; Thomas 2024; Thomas and Wood 2018; Wood and Allemang 2022; Wood and Thomas 2017). Relatedly, we also build off the larger *qualitative* literature that examines women's participation in non-combat

roles in rebel organizations (e.g., Coulter 2011; Cragin and Daly 2009; Loken 2022; MacKenzie 2012; Molyneux 1985; Parkinson 2013; Viterna 2013).

The rest of the article is structured as follows: first, we consider the role and value of magical practices in rebel organizations. We then discuss how women play a central role in the facilitation of these practices. Building off these two sections, we subsequently explain why we expect there to be a strong, positive association between the use of magical practices and participation of women in logistical support roles in rebel groups. Next, we develop a research design and present the results. Following this, we conduct additional analyses to investigate how magical practices are associated with women's involvement in other types of roles in rebel organizations. We conclude with a discussion of our findings.

Magic and Rebellion

In Africa, magical practices are a prominent feature of many traditional religious and spiritual belief systems. These magical practices involve the manipulation of common objects to fuse together the physical and spiritual worlds to derive powers from the spiritual realm. These powers are used to influence everyday outcomes in the physical realm to benefit practitioners. Such practices, for instance, include rituals and the wearing of protective amulets intended to bring power and/or protection to practitioners (e.g., Ellis 1999; Włodarczyk 2009).

Magical practices serve a variety of functions for rebel organizations that incentivize their use. We discuss these benefits to explain why rebel groups use them (and why they would consequently want to recruit female practitioners of magic). Not all groups adopt these practices, despite their benefits, especially if they do not come from a cultural context in which these

practices are present (Wlodarczyk 2009). However, Wlodarczyk (2009) identifies three primary functions of magical practices for rebel groups that are willing and able to adopt them.

First, these practices can help increase the public's perception of these groups' legitimacy, which subsequently helps rebels mobilize recruits. Wlodarczyk notes that rebels are often able to gain support for their cause by framing their struggle in spiritual terms and relying on spiritual leaders in the community to help garner further public support. Relatedly, the promise of the endowment of magical powers, including battlefield protections and enhanced fighting abilities, also helps groups recruit (Wlodarczyk 2009). Given that convincing civilians to take up arms is a central issue faced by rebel organizations (e.g., Lichbach 1994, 1995), magical practices are an attractive option to aid rebels in their mobilization efforts.

Second, Wlodarczyk (2009) also posits that magical practices can help rebel organizations strengthen discipline among the rank-and-file. Rebel leaders often cultivate the idea that they have magical powers that are even stronger than the average rank-and-file member. Cadres often come to believe, as a result, that the rebel leadership can use their magical powers to punish disobedience and to track down deserters and defectors. This helps increase discipline among the rank-and-file (Wlodarczyk 2009). Gates (2017), for instance, argues that the fear of punishment through magical means has been essential in maintaining discipline in the Lord's Resistance Army. Given the need of rebel leaders to maintain discipline and control over their subordinates (e.g., Hoover Green 2016, 2018), magical practices offer a valuable tool to achieve this goal.

Wlodarczyk (2009) notes that a third benefit of magical practices is that they help rebel leaders motivate their own recruits and intimidate enemy combatants. Specifically, the belief that magic increases the fighting capabilities of (rebel) soldiers, as well as making them invincible from enemy fire, both motivate those who practice magic to fight harder and take more risks,

while intimidating enemy forces, making them less willing to engage such rebels on the battlefield (Włodarczyk 2009). Włodarczyk notes that in Mozambique, for instance, RENAMO was often able to successfully intimidate government forces because of the belief that the rebels were magically powerful. Given that rebels often suffer from the power discrepancies between themselves and government forces (e.g., Crenshaw 1981), the ability of magic to motivate a group's soldiers and intimidate enemy forces can prove useful.

In sum, magical practices can aid rebel groups in overcoming a variety of common challenges they face including (1) gaining legitimacy and recruits; (2) maintaining internal discipline; and (3) motivating their soldiers and intimidating enemy fighters. Thus, if they operate in a cultural context in which magic is commonly believed in and practiced, rebels have strong incentive to practice magic. Given the benefits of magical practices, we expect that rebel groups will often engage in behaviors that help them implement these practices. Specifically, because of the central role that women play in the practice of magic in many societies more generally, we expect that there will be a strong, positive association between the use of magical practices and the recruitment of women into rebel groups. Indeed, just as militant groups recruit women to garner other benefits, such as battlefield success (e.g., Thomas 2021) and media attention (e.g., Bloom 2007), we expect that some groups will recruit women to gain benefits from the magical practices that they help facilitate.

As an important caveat, we are not arguing that these dynamics will result in women filling a diversity of roles within rebel organizations, as some of the aforementioned benefits will be more of an indirect result of women practicing magic in these organizations. For instance, female practitioners of magic tend to serve in logistical support roles, offering magical protections to combatants (Loken 2022). These proclaimed powers can help attract recruits to an organization

(Wlodarczyk 2009), however, this does not mean that female practitioners of magic are serving as actual recruiters in their group. Again, the expectation in existing qualitative literature is that female practitioners of magic typically serve in logistical support roles (e.g., Loken 2022).

Women and Magical Practices

Women play a central role in many traditional African religions in which the aforementioned magical practices feature prominently. Kilson (1976) notes that while there are strong patriarchal dimensions to some traditional African religions (as with other religions across the world), women still play important roles in these religions. Indeed, Kilson explains that while women often serve in subordinate roles in many of these religions, they still fill essential tasks, including serving as ritual assistants and spiritual mediums. Kilson notes that women play an essential role in many major rituals, including those related to birth, life, and death. Ebere (2011) further emphasizes that women and men often play *complementary* roles in traditional African religions, with women playing a central role in the practice of various rituals, including fertility rituals.

Grillo (2018) writes that in West Africa, women play a vital role in the use of rituals to engage in “spiritual combat” against malevolent spiritual forces that threaten their communities. The belief that women can harness magical powers to provide protection has played an important role in many conflicts. Thabane (2000) notes that the belief that women can invoke magical and spiritual powers for healing has led to them playing a central role in many rebellions. Similarly, Oriola (2012, p. 547) explains that women are essential to many insurgent movements because they provide “spiritual fortification” to participants. Thus, for groups that want to engage in such protective rituals, it is vital that they incorporate women into their movements.

However, it is also important to acknowledge the paradoxical nature of women's involvement as magical practitioners in rebel groups. Oriola (2012) explains that while women play an essential role as magical practitioners in many rebel movements, these same organizations often engage in behavior that marginalizes these women. Specifically, there is a belief that magical charms will wear off men who have sexual intercourse with women or who come into contact with women who are menstruating. For instance, women soldiers in RENAMO were banned from group bases while they were menstruating (Wilson 1992), while Niger Delta insurgents banned women from their camps altogether because of such beliefs (Oriola et al. 2013). Consequently, it is often postmenopausal women who carry out protective rituals for rebel groups (Oriola 2012; Oriola et al. 2013).

Additionally, (particularly older) women who engage in magic sometimes become negatively labeled as witches (Stevens 2006). This is especially concerning given that women are often labeled as witches to justify their murder (Miguel 2005). For instance, while UNITA leader Jonas Savimbi relied on women he believed would bring him magical protections on the battlefield (Almeida 2009), he would also have his opponents accused of witchcraft and burn them to death at public rallies (Whitney and Jolliffe 1989).

Thus, while magical practices promote the incorporation of women into rebel groups in some ways, they also help reinforce patriarchal norms within these organizations. However, despite these dynamics, there is still a strong expectation that the desire to employ magical practices increases the probability that rebel groups incorporate women because of the perceived benefits that female practitioners of magic bring. As an important caveat, we are not arguing that all individual beliefs or interpretations of traditional African religions, from which magical practices are derived, place the exact same level of importance on women's participation. However, we

expect that, on average, groups that engage in magical practices derived from these religions are more likely to incorporate women, given the very prominent role that women play in many traditional African religions (Ebere 2011; Grillo 2018; Kilson 1976; Oriola 2012; Oriola et al. 2013; Thabane 2000).

Testable Implication

In sum, magical practices aid rebel groups in a variety of important ventures, including garnering greater legitimacy and more recruits; enforcing discipline among the rank-and-file; and inspiring recruits to fight harder while intimidating enemy forces (Włodarczyk 2009). Given that these are essential functions for rebel groups, they often have the strong incentive to employ magical practices and beliefs.

Women play an essential role in many of the belief systems from which these magical practices are derived (e.g., Oriola 2012). Specifically, women are believed to be vital in the exercise of rituals, including those believed to provide protection to its recipients (Oriola 2012). Given that the belief magic provides protection to recruits is essential to functions such as generating legitimacy and mobilizing and motivating recruits (Włodarczyk 2009), groups that want to derive these benefits from magical practices have strong incentive to recruit women. We expect that groups will be more likely to recruit women into *logistical support* roles when they engage in magical practices specifically because they need women in these roles to conduct such rituals. This leads to our central hypothesis that:

H1: Rebel organizations that employ magical practices are more likely to recruit women into logistical support roles than groups that do not practice magic.

Research Design

Sample and Explanatory Variables

To test these hypotheses, we rely on data from the Magical Acts by Groups in Civil Conflicts (MAGICC) dataset (Soules and Avdan 2024), which contains information on the magical practices of 106 African rebel organizations, taken from the Non-State Actor Dataset (Cunningham et al. 2013), whose list of actors is derived from the Uppsala Conflict Data Program's (UCDP) Armed Conflict Dataset (ACD) (Gleditsch et al. 2002). The groups in the MAGICC dataset were active at least at some point during the period of 1989 to 2011. The data are limited to Africa both because of resource constraints associated with constructing the dataset and because while magical practices are featured in rebel organizations across the world, they are more common in Africa (Soules and Avdan 2024; Wlodarczyk 2009).

The MAGICC dataset contains two sets of variables. The first capture magical practices that are employed throughout the entire organization, by both the rank-and-file and leadership. These practices include the use of protective amulets, magic-based initiation rituals, beliefs in increased fighting abilities, and other ritualistic practices. The second set of variables in MAGICC also covers the subset of these organizations that have leaders believed to possess magical powers beyond that of the average foot soldier in the organization (e.g., augmented magical powers such as flight and/or being viewed as a prophet or messiah). We focus on the former categorization because our theoretical expectation is that women play an important role in facilitating magical practices to benefit members throughout the ranks of militant organizations.

Specifically, using the MAGICC dataset, we employ binary indicators of whether the group engaged in magical practices throughout the entire organization. Two versions of this variable were built: one with a more inclusive threshold of evidence for coding and one with a more

restrictive or exclusive threshold. The thresholds are based on the clarity and consistency of the available evidence, as well as whether reports of magical practices within groups were anecdotal or widespread (Soules and Avdan 2024). We employ both versions in our main analysis.

The data are time invariant due to the limited information on many of these rebel groups' internal practices (Soules and Avdan 2024). Thus, we perform cross-sectional analyses. However, the data for the main dependent variables are also time-invariant. While the structure of the data place limits on causal identification, we believe that examining the association between magical practices and the recruitment of women is still valuable, given the central role that both variables play in many rebel organizations.

Outcome Variable

For the dependent variable, we use data from the Women's Activities in Armed Rebellion (WAAR) project (Loken and Matfess 2024a), which provides a variety of variables measuring a diversity of types of women's participation in rebel organizations. WAAR contains data on rebel groups featured in the Uppsala Conflict Data Program dyadic dataset from 1946-2015, and thus, overlaps with the MAGICC dataset. As discussed in the theory, we expect that rebel groups that engage in magical practices often recruit women into logistical support roles because of beliefs about the central role of women as practitioners of magic (Loken 2022). To this end, WAAR contains a binary indicator of whether groups recruit women into non-combat logistical support roles, which involve "performing logistical tasks, including but not limited to nurses, medics, cooks, couriers, planners, administrators, radio or weapons operators and guards" (Loken and Matfess 2024b, p. 10). Thus, this variable captures women's incorporation into support roles in

rebel organizations. However, we conduct additional analyses, later in the manuscript, that examine the association between magical practices and the recruitment of women into other roles within armed groups.

This variable is available for 99 of the 106 groups present in the MAGICC dataset. Of these 99 groups, 38 (approximately 38.4%) recruit women into non-combat logistical support roles. Of these 99 groups, 36 meet the more inclusive threshold for being coded as using magical practices, while 21 meet the stricter threshold. Based on the measure with the more inclusive threshold, 27 of the 38 groups that recruit women into logistical support roles also employ magical practices. When using the more exclusive threshold, 16 of these 38 groups that incorporate women into logistical support roles also use magical practices. We employ logistic regression analysis because the dependent variable is dichotomous. The standard errors are clustered on the rebel group.

Control Variables

We also include a variety of control variables. However, given the limited number of observations, we are also mindful of the risks of including too many covariates. In response, we present multiple models, each of which includes additional control variables, beginning with a simple bivariate analysis. We do so to ensure that the number of control variables and the ensuing missing observations are not driving the results. Using data from the Foundations of Rebel Group Emergence (FORGE) dataset (Braithwaite and Cunningham 2020), we include two separate binary indicators: one measuring whether the group has a religious ideology and the other if they have a left-wing ideology (either communist or broader left-leaning beliefs). Both

ideologies affect the extent to which rebels recruit women (e.g., Wood and Thomas 2017).

Additionally, we want to distinguish the effects of magical practices from broader religious ideologies. Left-wing ideologies also often emphasize secular beliefs and practices.

With data from the NSA dataset (Cunningham et al. 2013), we also include a binary indicator of whether the group is much weaker than the government it is fighting. Wood and Thomas (2017) include the same control in their analysis of which type of militant groups are most likely to recruit women. Strong groups are better able to facilitate the incorporation of women (Thomas and Bond 2015), and magical practices help increase recruitment (Włodarczyk 2009), which could help strengthen militant organizations. Relatedly, the age of rebel groups affects the probability that they recruit women (e.g., Israelsen 2020; O'Rourke 2009) and groups that employ magical practices might last longer because they have more devoted recruits (Włodarczyk 2009). Thus, we also control for the lifespan, in years, of the groups. To calculate the lifespan, we use the most updated version of the UCDP Conflict Termination Dataset (v3-2021), originally developed by Kreutz (2010). Specifically, we take the time, in years, between the last and first years of recorded for each group in the dataset.

Magical practices are strongly associated with the forced recruitment of children (Soules and Avdan 2024) and many rebel organizations forcibly recruit girls and women into their ranks (e.g., Braithwaite and Ruiz 2018; Henshaw 2016b). Thus, using data from Haer et al. (2020), we include a three-point ordinal indicator of the extent to which groups employ the forced recruitment of children. We employ the highest recorded level of this measure across a group's lifetime.

We also account for the role of country and conflict-level factors. Societal-level religious practices can affect both the recruitment of women (e.g., Wood and Thomas 2017) and the

adoption of magical practices by rebel organizations (Włodarczyk 2009). Thus, with data from the World Religion Dataset (Maoz and Henderson 2013), we control for both the proportion of the population that practices Islam and the proportion that adheres to Animist belief systems. The World Religion dataset provides these estimates in five-year intervals, so we take the values closest to the first year a group is involved in a conflict with a battle-related death. Using data from the Varieties of Democracy (V-Dem) dataset (Sundström et al. 2017), we also include an index measure of women's political empowerment. Societal-level spiritual beliefs that rebel groups draw from might also affect societal gender norms and rebel groups are more likely to recruit women in societies with higher levels of women's rights (e.g., Wood and Thomas 2017). Finally, we control for the Polity V project's 21-point ordinal measure of how democratic a regime is (Marshall and Jaggers 2020), as well as logged per capita GDP, using data from Fariss et al. (2022). The measures of women's political empowerment, regime type, and economic development are all also recorded for the first year that a group starts fighting.

Results

Table 1: Rebel Magical Practices and Recruitment of Women into Non-Combat Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	2.097*** (0.574)	1.219 (0.833)	2.055** (1.042)			
Magical Practices (inc.)				2.652*** (0.511)	1.668** (0.734)	2.572*** (0.941)
Religious		-2.578*** (0.963)	-2.900*** (1.035)		-2.520** (1.129)	-2.908** (1.161)
Left-Wing		2.498* (1.275)	2.183 (1.708)		2.543* (1.364)	2.032 (1.860)
Much Weaker		-0.688 (0.785)	-0.00846 (0.901)		-0.835 (0.795)	-0.179 (0.959)
Rebel Age		0.228*** (0.0747)	0.284*** (0.0895)		0.219** (0.0936)	0.290*** (0.110)
Forced Recruitment of Children		1.245*** (0.468)	1.592** (0.657)		1.040** (0.503)	1.380* (0.822)
Percent Animist			-0.739 (3.233)			-1.532 (3.718)
Percent Muslim			2.368* (1.379)			2.438* (1.327)
Women's Political Empowerment			0.833 (2.075)			0.950 (2.239)
per capita GDP (Logged)			-3.894* (2.213)			-4.358** (1.942)
Polity2			-0.0155 (0.0952)			-0.0307 (0.0909)
Constant	-0.934*** (0.253)	-2.906*** (0.656)	-4.664*** (1.781)	-1.553*** (0.334)	-3.024*** (0.646)	-4.797*** (1.685)
Observations	99	96	93	99	96	93
Chi ²	13.37***	21.98***	23.42**	26.95***	25.22***	32.03***
Log Likelihood	-57.93	-36.15	-32.05	-49.42	-34.33	-30
Pseudo R-squared	0.121	0.431	0.475	0.250	0.460	0.509

Robust standard errors in parentheses

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

The findings are presented in **Table 1**. As the results indicate, we find fairly consistent evidence that groups that employ magical practices are also more likely to recruit women into logistical support roles. The association is positive in all models and statistically significant in all but one, dropping just below statistical significance ($p \sim 0.143$). The marginal effects for the more restrictive measure of magical practices, with the full set of control variables, is presented in **Figure 1**. Based on this model, it appears that groups who employ magical practices are almost 22% more likely to recruit women into logistical support roles than groups who do not engage in magical practices. Thus, magical practices have a fairly large substantive impact on the incorporation of women into support roles in armed movements.

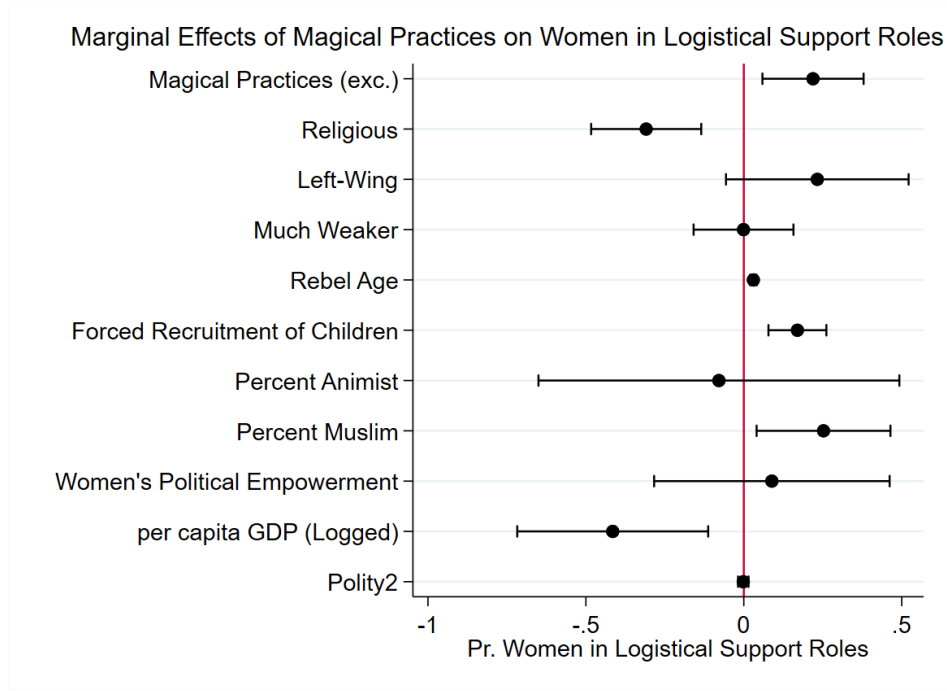


Figure 1: Marginal Effects of Magical Practices on the Probability of Recruiting Women into Logistical Support Roles

Additional Analyses

We also conduct a variety of additional statistical tests to further assess the association between magical practices and the recruitment of women by rebel organizations.

Women's Participation in Other Roles

We begin by examining how magical practices are associated with women's incorporation into a variety of other roles in rebel organizations. The WAAR dataset contains measures of women's participation in a variety of other combat and non-combat roles not used in the main analysis (Loken and Matfess 2024a). We reconduct the main analysis, using these measures as alternative outcome variables. First, the WAAR dataset contains an ordinal measure of the prevalence of women in non-combat roles. This measure does not distinguish between the different types of non-combat roles. Across a series of ordered logistic regression analyses, we find consistent evidence of a positive and statistically significant association between magical practices and the prevalence of women in non-combat roles (**Table A1**).

In addition to the non-combat logistics participation measure employed in the main analysis, the WAAR dataset also contains two additional binary indicators of specific types of non-combat participation: clandestine participation and outreach participation. Outreach roles include fundraising, mobilizing community members, and providing services, among other similar tasks. Clandestine participation includes serving as spies, smugglers, and intelligence operators. Across a series of logistic regression analyses, we do not find consistent support of a statistically significant association between magical practices and women's participation in either outreach

(**Table A2**) or clandestine roles (**Table A3**). Thus, women's participation appears to be linked to logistical support functions but not other types of *non-combat* roles.

The WAAR dataset also contains measures of women's participation in frontline combat roles, which include the use of weapons, combat training, and/or other activities on the frontline (Loken and Matfess 2024b). We conduct a series of ordered logistic regression analyses, using an ordinal measure of women's participation in combat roles as the outcome variable. Across all models, we find a positive and statistically significant association between the use of magical practices and women's participation in frontline combat roles (**Table A4**). This is particularly interesting given that at least some rebel organizations that have engaged in magical practices prohibit their male soldiers from interacting with women who are menstruating because they believe such contact will remove magical protections from their male combatants (e.g., Oriola et al. 2013; Wilson 1992).

However, in other armed groups, female practitioners of magic have been more active on the frontline. As noted earlier the leader of UNITA, Jonas Savimbi, would bring a woman into battle who he believed had the power to make him immune from harm (Pullella 2009). In Rwanda, women served as spirit mediums in the Armed People for the Liberation of Rwanda (ALiR) and women in prayer groups would sometimes follow soldiers into battle (Loken and Matfess 2024c). Given that the line between women's participation in combat and non-combat roles in civil wars is sometimes blurred as many women fill both roles (MacKenzie 2012), it is somewhat unsurprising to observe female practitioners of magic in both logistical support and frontline roles, as they are believed to be able to protect soldiers in either role.

Finally, the WAAR dataset contains information on women's participation in leadership roles. Women are considered to engage in leadership roles when they participate in "Activities

involving the exercise of direct control over and provide oversight of other participations and/or exercise direct control over the strategy, policies, and/or ideology of the group” (Loken and Matfess 2024b). Across a series of ordered logistic regression analyses, we examine the association between magical practices and an ordinal measure of women’s participation in leadership roles. The association between these variables is statistically significant in only two of the six models (**Table A5**). This finding might be reflective of the aforementioned idea that while women play important roles in many of the religions from which these magical practices are derived, their agency is still often limited in other ways in many of these traditions (Oriola 2012; Oriola et al. 2013; Wilson 1992). Thus, magical practices are associated with women’s participation in some roles but not others.

Girl Soldiers

Next, we investigate the extent to which magical practices are associated with the recruitment of young girls into rebel organizations. Indeed, scholars have argued that girls in particular are believed by many in the region to possess magical powers, which leads to their increased recruitment and abduction by some armed movements (Dallaire 2010; Gilbert and Green 2015). To assess this argument, we use data on girl child soldiering from Haer and Böhmelt (2018). Specifically, we employ their three-point ordinal indicator of the prevalence of the recruitment of girls into any role. We do *not* find consistent evidence of an association between magical practices and the recruitment of girls. While the association between magical practices and the recruitment of girls is always positive, it is not consistently statistically significant (**Table A6**). The mixed results might be driven by the fact that while some groups recruit girls because they believe them to have magical powers (Dallaire 2010; Gilbert and Green 2015), other groups that

recruit women for magical purposes only recruit postmenopausal women (Oriola 2012; Oriola et al. 2013).

Magically Powerful Leaders

We also consider an alternative measure of the main explanatory variable. As discussed earlier, the MAGICC dataset also measures whether rebel groups have leaders who are believed to have magical abilities that are even stronger than the average member of the organization. The dataset also includes two versions of this variable, with more inclusive and stricter thresholds for evidence. We rerun the main analyses, using these as the two main independent variables instead. We do not find consistent evidence an association between magically powerful rebel leaders and the recruitment of women, as the relationship is only statistically significant in the bivariate models (**Table A7**).

Alternative Sample

Next, given the small sample size in the main analysis, we want to ensure that idiosyncrasies of the sample are not driving the results. To do this, we use data from Thomas and Bond (2015), who analyze the recruitment of women into rebel, terrorist, and pro-government militias in Africa. This sample is relevant as magical practices are found in other types of armed movements, not just rebel groups. For instance, women serve as magic bearers in the Mai-Mai, a pro-government militia in the Democratic Republic of the Congo (Washington Post 2019). Thus, building off the MAGICC dataset, we code whether an organization employs magical practices for all groups in Thomas and Bond's data.

In one set of analyses (Table 3 in their article), Thomas and Bond employ a binary indicator of whether groups recruit women into any role, as the dependent variable, across a series of logistic regression analyses. We replicate the analysis in this table, keeping all of Thomas and Bond's model specifications the same except for our addition of the measure of magical practices. We find that in three of the four models, magical practices have a positive and statistically significant association with the probability that armed groups recruit women into any role. The only model in which this association loses statistical significance is the one in which all groups whose mid-point of their lifespan before 1980 are excluded (**Table A8**).

In another set of tests, Thomas and Bond examine the recruitment of women into combat roles (Table 4 in their article). We replicate these tests as well. While the association between magical practices and the recruitment of women into combat roles is always positive, it never achieves statistical significance (**Table A9**). Thus, among this sample of armed groups, there is evidence of magical practices being associated with the recruitment of women into armed groups generally, but not into combat roles specifically.

In sum, across a battery of alternative statistical tests, we find that magical practices are associated with the incorporation of women into logistical support (in line with the central hypothesis) and some evidence of their recruitment into combat roles. However, these practices are *not* consistently associated with other forms of women's participation in militant groups. The results of these alternative tests are summarized in **Table 2**.

Table 2: Summary of Results of Alternative Tests

Appendix Table	Modification	Relationship
1	DV: Ordinal Measure of Women in Non-Combat Roles (General)	Positive and always statistically significant (6/6 models)
2	DV: Binary Measure of Women’s Participation in Outreach Roles	Positive but not consistently statistically significant (2/6 models)
3	DV: Binary Measure of Women’s Participation in Clandestine Roles	Positive but not consistently statistically significant (2/6 models)
4	DV: Ordinal Measure of Women in Frontline Roles	Positive and always statistically significant (6/6 models)
5	DV: Ordinal Measure of Women in Leadership Roles	Positive but not consistently statistically significant (2/6 models)
6	DV: Ordinal Measure of Recruitment of Girls (Any Role)	Positive but not consistently statistically significant (3/6 models)
7	IV: Magically Powerful Leaders	Positive but not consistently statistically significant (2/6 models)
8	Thomas & Bond (2015) – Replication: Women in Any Roles	Positive and mostly statistically significant (3/4 models)
9	Thomas & Bond (2015) – Replication: Women in Combat Roles	Positive but never statistically significant (0/4 models)

Discussion and Conclusion

Female practitioners of magic have played an important role in rebellions in places such as Angola, Mozambique, Sierra Leone, and Uganda. Women have played a vital role for these groups specifically because so many rebel organizations use magical practices to facilitate recruitment and indoctrination. However, despite its relevance, quantitative scholarship on women’s participation in civil wars has largely overlooked the relationship between magical practices and beliefs and women’s participation in rebel groups.

To remedy this, we provided the first, to the best of our knowledge, cross-rebel group quantitative analysis on the relationship between magical practices and the incorporation of women into rebel movements. Our results show that groups that engage in magical practices are significantly more likely to incorporate women into logistical support roles, highlighting the central role of women as practitioners of magic in many rebel movements.

There are, of course, limitations to our study. Due to the time invariant nature of the data, we are not able to establish causality. Rather, we simply found evidence of a positive association between magical practices and the recruitment of women into logistical support (and to a certain extent, combat) roles in rebel organizations. However, given the many examples of the important role that female practitioners of magic have played in various rebel organizations, we believe it is important to highlight this relationship. In particular, we believe that quantitative studies on women's participation in armed groups, particularly those that examine the role of (religious) ideology, should account for the role of magical practices.

While rebels in other parts of the world do engage in magical practices (Soules and Avdan 2024), we do not make strong claims about the generalizability of our findings. Indeed, the data on magical practices we use are limited only to Africa. Additionally, much of the theoretical literature we draw on is specific to traditional African spiritual beliefs and practices. However, given the prevalence of civil conflict in Africa, understanding region-specific dynamics is valuable. Furthermore, cross-national quantitative analysis can sometimes overlook important regional variation, and thus, it is valuable to understand this regional variation in the dynamics of civil wars.

Women serve a variety of vital functions in many rebel organizations. In many armed movements, women have been viewed as essential because of their roles as practitioners of magic, as such practices are believed by adherents to improve everyday outcomes. In the context of civil wars, rebel groups use women to perform magical rituals believed to bring power and protection to members, which, in turn, serves a variety of functions, including for recruitment, discipline, and motivation. Scholars who study civil wars, particularly women's participation in these conflicts, should not overlook the central role of women as practitioners of magic.

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Appendix: Magical Practices and the Recruitment of Women into Rebel Groups

Table A1: Rebel Magical Practices and Recruitment of Women into Non-Combat Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	2.175*** (0.509)	1.251** (0.627)	2.244*** (0.739)			
Magical Practices (inc.)				2.774*** (0.581)	1.883*** (0.664)	2.532*** (0.801)
Religious		-0.276 (0.776)	-0.143 (1.257)		-0.0999 (0.669)	-0.201 (1.105)
Left-Wing		2.889 (2.213)	4.856*** (1.705)		3.338 (2.533)	5.252*** (1.653)
Much Weaker		-0.701 (0.639)	-0.252 (0.824)		-0.589 (0.676)	0.145 (0.915)
Rebel Age		0.0735 (0.0476)	0.0800 (0.0815)		0.0489 (0.0421)	0.0436 (0.0572)
Forced Recruitment of Children		1.361*** (0.391)	2.007*** (0.452)		1.244*** (0.415)	1.887*** (0.490)
Percent Animist			-2.536 (4.792)			-1.766 (4.078)
Percent Muslim			-0.104 (1.481)			0.176 (1.811)
Women's Political Empowerment			-2.282 (2.134)			-2.555 (1.968)
per capita GDP (Logged)			-2.529 (1.740)			-2.294 (1.440)
Polity2			-0.0759 (0.0967)			-0.113 (0.102)
Cutpoint 1	1.269*** (0.297)	2.829*** (0.624)	2.326 (1.436)	1.953*** (0.416)	3.134*** (0.717)	2.750* (1.456)
Cutpoint 2	1.697*** (0.339)	3.527*** (0.755)	3.224** (1.480)	2.467*** (0.478)	3.868*** (0.852)	3.650** (1.463)
Cutpoint 3	3.040*** (0.534)	5.504*** (0.868)	5.437*** (1.566)	3.888*** (0.678)	5.845*** (0.957)	5.906*** (1.590)
Observations	88	85	82	88	85	82
Chi ²	18.23***	19.96***	56.02***	22.77***	25.14***	52.93***
Log Likelihood	-76.95	-55.84	-44.13	-70.09	-53.79	-43.65
Pseudo R-squared	0.105	0.314	0.428	0.185	0.339	0.434

Robust standard errors in parentheses

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

Table A2: Rebel Magical Practices and Recruitment of Women into Outreach Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	1.340** (0.526)	0.386 (0.776)	1.027 (1.306)			
Magical Practices (inc.)				1.817*** (0.507)	0.0977 (0.682)	0.443 (0.941)
Religious		-1.051 (0.896)	-1.201 (1.170)		-1.127 (0.857)	-1.296 (1.195)
Left-Wing		1.852 (2.080)	2.123 (1.726)		1.712 (2.184)	1.817 (1.750)
Much Weaker		-0.672 (0.743)	-0.0883 (0.975)		-0.743 (0.757)	-0.312 (0.873)
Rebel Age		0.198*** (0.0558)	0.215*** (0.0808)		0.199*** (0.0575)	0.205*** (0.0749)
Forced Recruitment of Children		1.277*** (0.480)	1.614*** (0.561)		1.327*** (0.502)	1.548*** (0.561)
Percent Animist			0.768 (3.324)			1.690 (3.312)
Percent Muslim			2.225 (1.474)			1.987 (1.248)
Women's Political Empowerment			-1.051 (2.216)			-1.128 (2.225)
per capita GDP (Logged)			-2.321 (2.108)			-1.862 (1.676)
Polity2			-0.195 (0.164)			-0.196 (0.175)
Constant	-1.435*** (0.289)	-3.911*** (0.964)	-5.524** (2.655)	-1.928*** (0.380)	-3.854*** (0.912)	-5.265** (2.222)
Observations	99	96	93	99	96	93
Chi ²	6.498**	19.68***	18.36*	12.83***	20.19***	19.93**
Log Likelihood	-52.72	-30.87	-26.94	-48.88	-30.98	-27.41
Pseudo R-squared	0.0577	0.416	0.458	0.126	0.414	0.448

Robust standard errors in parentheses

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

Table A3: Rebel Magical Practices and Recruitment of Women into Clandestine Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	1.711*** (0.548)	0.864 (0.806)	1.644 (1.144)			
Magical Practices (inc.)				1.915*** (0.549)	0.672 (0.869)	1.087 (1.236)
Religious		0.191 (0.777)	1.698 (1.290)		0.117 (0.824)	1.507 (1.533)
Left-Wing		2.237 (1.956)	2.567 (1.786)		2.038 (2.327)	2.096 (2.048)
Much Weaker		-1.729** (0.857)	-0.0872 (1.094)		-1.740** (0.887)	-0.496 (0.994)
Rebel Age		0.120*** (0.0424)	0.135** (0.0560)		0.110** (0.0434)	0.115** (0.0533)
Forced Recruitment of Children		1.402*** (0.477)	1.565*** (0.543)		1.384*** (0.464)	1.394** (0.675)
Percent Animist			2.319 (3.089)			3.398 (3.097)
Percent Muslim			1.343 (1.790)			1.110 (1.649)
Women's Political Empowerment			4.562* (2.663)			4.779* (2.837)
per capita GDP (Logged)			-6.252*** (2.387)			-5.101** (2.087)
Polity2			-0.349** (0.139)			-0.348** (0.143)
Constant	-1.807*** (0.327)	-4.009*** (0.792)	-8.284*** (2.427)	-2.251*** (0.431)	-3.917*** (0.808)	-8.033*** (2.225)
Observations	99	96	93	99	96	93
Chi ²	9.771***	29.27***	36.77***	12.16***	33.53***	39.26***
Log Likelihood	-46.26	-28.44	-22.14	-44.26	-28.73	-22.90
Pseudo R-squared	0.0957	0.421	0.530	0.135	0.415	0.514

Robust standard errors in parentheses

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

Table A4: Rebel Magical Practices and Recruitment of Women into Frontline Combat Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	2.524*** (0.606)	1.893*** (0.636)	3.322*** (0.923)			
Magical Practices (inc.)				2.480*** (0.566)	1.567** (0.674)	1.848** (0.848)
Religious		-0.120 (0.604)	0.977 (1.005)		-0.175 (0.591)	0.828 (0.945)
Left-Wing		2.763 (2.422)	5.658*** (2.073)		2.353 (2.481)	4.689* (2.508)
Much Weaker		-0.287 (0.669)	0.542 (0.617)		-0.388 (0.652)	-0.0137 (0.777)
Rebel Age		0.0503 (0.0401)	0.0149 (0.0621)		0.0383 (0.0342)	0.00202 (0.0570)
Forced Recruitment of Children		1.166*** (0.408)	1.461*** (0.536)		1.029** (0.416)	1.148** (0.494)
Percent Animist			1.799 (2.897)			3.561 (2.457)
Percent Muslim			0.306 (1.295)			-0.0758 (1.603)
Women's Political Empowerment			1.426 (1.754)			1.287 (1.900)
per capita GDP (Logged)			-4.134* (2.256)			-2.828 (1.881)
Polity2			-0.240** (0.105)			-0.207* (0.113)
Cutpoint 1	1.517*** (0.308)	2.874*** (0.553)	4.719*** (1.564)	2.008*** (0.410)	2.841*** (0.552)	4.268** (1.660)
Cutpoint 2	1.827*** (0.317)	3.343*** (0.603)	5.383*** (1.641)	2.330*** (0.429)	3.290*** (0.567)	4.829*** (1.683)
Cutpoint 3	3.995*** (0.660)	6.137*** (0.977)	9.228*** (1.922)	4.366*** (0.728)	5.793*** (0.892)	7.795*** (1.798)
Cutpoint 4	4.992*** (1.040)	7.157*** (1.187)	10.55*** (2.071)	5.338*** (1.076)	6.784*** (1.105)	9.057*** (1.951)
Observations	90	87	84	90	87	84
Chi ²	17.37***	24.22***	33.33***	19.18***	36.65***	42.62***
Log Likelihood	-69.83	-54.77	-42.49	-68.04	-56.13	-47.24
Pseudo R-squared	0.132	0.298	0.428	0.154	0.281	0.364

Robust standard errors in parentheses

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

Table A5: Rebel Magical Practices and Recruitment of Women into Leadership Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	1.267** (0.570)	0.492 (0.752)	1.181 (0.921)			
Magical Practices (inc.)				1.742*** (0.577)	0.528 (0.780)	1.052 (1.121)
Religious		-0.282 (0.606)	0.577 (1.589)		-0.283 (0.566)	0.571 (1.302)
Left-Wing		1.806 (1.273)	2.774* (1.442)		1.700 (1.308)	2.351 (1.484)
Much Weaker		-0.581 (0.795)	-0.134 (1.154)		-0.626 (0.761)	-0.300 (1.174)
Rebel Age		0.0644* (0.0347)	-0.00248 (0.0527)		0.0625** (0.0309)	-0.0129 (0.0520)
Forced Recruitment of Children		0.665* (0.396)	0.935 (0.578)		0.593 (0.425)	0.689 (0.616)
Percent Animist			2.194 (3.360)			3.544 (3.250)
Percent Muslim			0.679 (1.280)			0.475 (1.244)
Women's Political Empowerment			0.800 (3.284)			0.489 (2.896)
per capita GDP (Logged)			-4.802*** (1.206)			-4.948*** (1.245)
Polity2			-0.353* (0.181)			-0.381** (0.187)
Cutpoint 1	1.640*** (0.317)	2.769*** (0.536)	4.538 (2.952)	2.163*** (0.443)	2.798*** (0.575)	4.408 (2.695)
Cutpoint 2	2.038*** (0.343)	3.390*** (0.682)	5.198* (3.095)	2.590*** (0.509)	3.421*** (0.734)	5.057* (2.844)
Cutpoint 3	3.030*** (0.511)	5.003*** (0.889)	7.063** (3.061)	3.598*** (0.672)	5.003*** (0.946)	6.880** (2.801)
Cutpoint 4	4.893*** (1.100)			5.463*** (1.241)		
Observations	91	88	85	91	88	85
Chi ²	4.938**	36.78***	46.01***	9.103***	41.20***	49.58***
Log Likelihood	-67.50	-48.73	-36.43	-64.47	-48.72	-36.62
Pseudo R-squared	0.0334	0.203	0.344	0.0769	0.203	0.340

Robust standard errors in parentheses

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

Table A6: Rebel Magical Practices and Recruitment of Girls

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	2.080*** (0.490)	1.397** (0.627)	1.154 (0.730)			
Magical Practices (inc.)				1.733*** (0.430)	0.296 (0.658)	-0.132 (0.715)
Religious		-0.178 (0.570)	0.776 (0.746)		-0.268 (0.592)	0.752 (0.764)
Left-Wing		2.082 (1.751)	2.266 (1.653)		1.568 (1.766)	1.916 (1.709)
Much Weaker		0.666 (0.602)	0.650 (0.633)		0.428 (0.581)	0.355 (0.603)
Rebel Age		0.115*** (0.0316)	0.102*** (0.0375)		0.115*** (0.0326)	0.109** (0.0458)
Forced Recruitment of Children		1.767*** (0.462)	1.637*** (0.469)		1.864*** (0.516)	1.761*** (0.554)
Percent Animist			2.866 (2.179)			4.114* (2.161)
Percent Muslim			-2.344*** (0.901)			-2.625*** (0.903)
Women's Political Empowerment			-2.574* (1.505)			-2.287 (1.544)
per capita GDP (Logged)			-0.0780 (1.198)			0.282 (1.153)
Polity2			0.00224 (0.0719)			0.0260 (0.0792)
Cutpoint 1	0.284 (0.223)	2.244*** (0.460)	0.235 (1.114)	0.548** (0.265)	2.087*** (0.436)	0.194 (1.110)
Cutpoint 2	3.035*** (0.470)	6.599*** (1.003)	4.804*** (1.431)	3.218*** (0.516)	6.246*** (0.938)	4.641*** (1.413)
Observations	106	103	100	106	103	100
Chi ²	18.01***	40.23***	42.70***	16.23***	38.09***	43.39***
Log Likelihood	-90.54	-60.77	-55.22	-90.27	-63.07	-56.50
Pseudo R-squared	0.0898	0.374	0.407	0.0926	0.351	0.394

Robust standard errors in parentheses

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

Table A7: Magically Powerful Rebel Leaders and Recruitment of Women into Logistical Support Roles

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Leaders (exc.)	1.896** (0.836)	0.485 (1.187)	1.102 (1.308)			
Magical Leaders (inc.)				1.627** (0.638)	0.475 (1.127)	0.880 (1.321)
Religious		-2.860*** (1.018)	-3.035*** (1.154)		-2.833*** (1.017)	-3.061*** (1.100)
Left-Wing		2.298* (1.314)	1.905 (1.738)		2.323* (1.301)	1.959 (1.770)
Much Weaker		-0.927 (0.801)	-0.533 (0.919)		-0.895 (0.795)	-0.480 (0.900)
Rebel Age		0.234*** (0.0721)	0.283*** (0.0871)		0.236*** (0.0754)	0.291*** (0.0901)
Forced Recruitment of Children		1.452*** (0.435)	1.755** (0.686)		1.423*** (0.462)	1.720** (0.677)
Percent Animist			0.0625 (2.900)			0.00748 (2.959)
Percent Muslim			1.751 (1.404)			1.829 (1.293)
Women's Political Empowerment			1.141 (2.081)			1.078 (2.118)
per capita GDP (Logged)			-3.350 (2.207)			-3.250 (2.058)
Polity2			-0.00442 (0.110)			0.00126 (0.102)
Constant	-0.644*** (0.223)	-2.769*** (0.664)	-4.248** (1.819)	-0.711*** (0.232)	-2.793*** (0.652)	-4.311** (1.740)
Observations	99	96	93	99	96	93
Chi ²	5.144**	20.37***	18.62*	6.499**	20.76***	19.51*
Log Likelihood	-62.72	-37.44	-34.41	-62.25	-37.38	-34.38
Pseudo R-squared	0.0486	0.411	0.436	0.0558	0.411	0.437

Robust standard errors in parentheses

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

Table A8: Replication of Thomas and Bond's (2015) Table 3 (General Recruitment of Women)

	(1) Base Models	(2) Full Model	(3) Equality Controls	(4) Group Level Controls
Magical Practices	0.947** (0.479)	0.477 (0.471)	0.866* (0.448)	0.824* (0.443)
Terrorist	1.216*** (0.370)	0.900 (0.548)	0.739** (0.304)	1.282*** (0.387)
Small	-1.231*** (0.328)	-0.913* (0.522)	-1.348** (0.551)	-1.274*** (0.345)
Gender Ideology	1.459** (0.584)	3.236*** (1.067)	3.239*** (0.920)	1.432** (0.639)
Competition	-0.0483 (0.0458)	0.000752 (0.102)	0.00938 (0.0750)	-0.0414 (0.0508)
Self-Defense/Paramilitary		-0.272 (1.059)		0.120 (0.542)
Fundamentalist		0.568 (0.826)		-0.118 (0.629)
Secessionist		-0.755* (0.428)		-0.573 (0.434)
Women in State Military		0.587 (0.591)	-0.283 (0.346)	
Women's Political Rights		-0.00583 (0.642)	0.399 (0.652)	
Physical Integrity Rights		-0.164 (0.219)		
Forced Recruitment		1.938*** (0.493)		
CEDAW Ratification		-0.0861 (0.584)	-0.0233 (0.392)	
Constant	-0.753 (0.543)	-1.194 (2.303)	-1.273 (1.661)	-0.606 (0.509)
Observations	145	100	103	145
Chi ²	21.52***	154.2***	355.8***	24.27***
Log Likelihood	-83.64	-49.93	-56.24	-82.68
Pseudo R-squared	0.168	0.279	0.210	0.177

Robust standard errors in parentheses

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

Table A9: Replication of Thomas and Bond's (2015) Table 4 (Recruitment of Women into Combat Roles)

	(1) Base Models	(2) Full Model	(3) Equality Controls	(4) Group Level Controls
Magical Practices	0.803 (0.516)	0.774 (0.840)	0.976 (0.695)	0.680 (0.479)
Terrorist	0.954** (0.479)	1.288** (0.576)	1.097** (0.519)	1.104** (0.445)
Small	-1.240*** (0.433)	-1.107 (0.783)	-1.285 (0.792)	-1.263*** (0.473)
Gender Ideology	0.884 (0.581)	3.409*** (1.004)	2.892*** (0.862)	1.035* (0.595)
Competition	-0.0360 (0.0559)	0.00374 (0.0960)	-0.0261 (0.124)	-0.0410 (0.0635)
Self-Defense/Paramilitary		0.992 (0.744)		0.558 (0.427)
Fundamentalist		-0.498 (1.003)		-1.058 (0.719)
Secessionist		-0.917* (0.476)		-0.230 (0.521)
Women in State Military		0.551 (0.674)	-0.136 (0.530)	
Women's Political Rights		-0.770 (0.840)	-0.300 (0.912)	
Physical Integrity Rights		-0.0269 (0.215)	-0.163 (0.228)	
Forced Recruitment		1.483* (0.780)		
CEDAW Ratification		1.097* (0.649)	0.764 (0.620)	
Constant	-1.353** (0.537)	-2.337 (2.174)	-1.463 (2.304)	-1.372*** (0.505)
Observations	136	93	96	136
Chi ²	17.36***	1414***	240.3***	41.86***
Log Likelihood	-75.56	-39.88	-43.89	-73.52
Pseudo R-squared	0.125	0.288	0.230	0.148

Robust standard errors in parentheses

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