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Female Combatants and Durability of Civil War

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ABSTRACT

How is conflict duration affected by female combatants in rebel group? In this study, we advance three possible pathways through which female combatants enhance the resilience of the rebel group, thereby lengthening the conflict. We explore this association using quantitative cross-sectional data on female combatant and conflict duration. The positive relationship between female combatants and civil war duration from quantitative analysis is substantiated by the qualitative evidence collected via in-depth interviews with former male and female combatants in the Maoist insurgency in Nepal. This work has important implications for the study of armed conflict duration, rebel organizations, and post-conflict peacebuilding.

Civil wars, insurgencies, and, more generally, domestic armed conflicts vary widely in terms of their duration. For instance, rebellions initiated by the Nagas and other groups in northeast India have endured for decades, whereas post-1991 conflicts in Eastern Europe have tended to be relatively brief. Much has been written about the potential factors associated with this variation. For instance, Buhaug and Gates have pointed to the importance of physical terrain and geography, Ross and Walsh et al. have emphasized the importance of natural resources and contraband, and Lyall has looked at the influence of democracy.

Surprisingly, few scholars have thus far explored how the composition of rebel groups might influence this variation. Our specific interest here is the impact of gender composition. This paper builds onto ever-growing literature on gender and armed conflict inspiring scholars and practitioners to look at various dynamics of conflict and post-conflict period through a gender lens. Particularly, existing studies on women in rebel groups have examined the supply factors (why women join armed groups) and the demand factors (i.e. why particular armed groups are inclined to recruit women). However, few studies examine the consequences of the participation of women for conflict dynamics, such as on conflict duration.

To examine the relationship, we built upon existing theories showcasing that the presence of women in rebel groups influences conflict duration in several ways. Their recruitment is not only a crucial human resource for the rebel group but also induces...
others, particularly male members, to join the group. Furthermore, recruiting women can produce significant strategic and political utility by attracting more national and international attention, as well as by strengthening the relationship between the rebel group and the civilian population—a factor regarded as essential for a rebel group’s survival and sustainment. These intertwined mechanisms are likely to positively influence the survival of the rebel group.

Empirically, we evaluate our argument by examining the influence of female combatants—defined as female members who have undergone military training, received combat weapons, and participated in organized combat activities on behalf of an organization during the conflict—on conflict duration (in years). In doing so, we combine the Women in Armed Conflict Dataset (WARD) with the Uppsala Conflict Data Program’s (UCDP) Armed Conflict dataset. To complement this analysis, we present several excerpts of interviews conducted with former male and female combatants that were active in the Communist Party of Nepal (CPN-M). We consider this group and their insurgency as a typical case. Not only was the Maoist insurgency in Nepal (1996–2006) characterized by a relatively high level of female participation but it also lasted relatively long in comparison to other insurgencies.

Conflict Duration and the Composition of Rebel Groups

Studies explaining the variation in conflict duration have primarily relied on the idea that conflicts continue if at least one of the belligerents believes that the dispute is more beneficial than peace. Factors influencing the willingness and opportunity of continuing war are then also of importance.

Most of these factors can be grouped into three interrelated clusters. First, some scholars have emphasized the importance of physical terrain and geography. For instance, Buhaug et al. show that conflicts, where rebels have access to an international border, are twice as long as other conflicts. Second, researchers have highlighted the effect of inequality along ethnic or religious lines, which lengthens a conflict. Lastly, some factors can impact the power positions of the insurgents and the state. For instance, Elbadawi and Sambanis demonstrate that external support can extend a conflict.

Surprisingly, many of these studies have overlooked the idea that the composition of an armed group might influence conflict dynamics including the length of a conflict. A few exceptions are worth noting. Some scholars have examined the effect of younger recruits. For instance, Haer and Böhmelt have shown that the recruitment of children by rebel groups significantly increases conflict duration. Others, such as Humphreys and Weinstein, have investigated the effect of the ethnic composition of armed groups. They have shown that more ethnically homogenous factions exhibit lower levels of civilian abuse during armed conflict. In a related vein, there has been research conducted on different types of recruits (opportunistic versus ideological) and how such motivations may influence conflict strategies and tactics. Opportunistic recruits tend to be less accountable to local communities and suffer fewer costs for abusing civilians and are therefore more likely to target civilians.
Another issue of group composition that might be influential is gender distribution. Most studies examining the role of women in conflict have focused on identifying a set of motivations that might uniquely condition women toward (the support of) violent behavior. Those studies commonly cite revenge, representation, and social role fulfillment as the motivations for women to join rebel groups. For instance, Alison shows that many women joined the Irish Republican Army or the Liberation Tigers of Tamil Eelam to improve the position of women in society. Bloom has emphasized the importance of revenge as a motivating factor. However, very few motivating factors are uniquely female. This suggests that factors encouraging women to join may not always be so different from those that motivate men's behavior. Therefore, more recent studies have examined the demand side i.e. the reasons why women are recruited by armed groups. For instance, Thomas and Bond stress the tactical importance of women: those groups that use terrorist tactics are more likely to recruit women. Other studies, such as Hedström, has in general terms discussed how women support war efforts. Few scholars have thus far examined how the inclusion of women in armed groups influences conflict dynamics, such as the length of conflict. To address this shortcoming, we built upon existing theories showcasing that the presence of female recruits in rebel groups influences the duration of intrastate armed conflict.

The Conflict-Prolonging Effect

Most work on conflict duration is based on the premise that an important power asymmetry exists between rebel groups and the government. Rebel groups typically start relatively weak. They attempt to address this power asymmetry as quickly as possible to decrease their vulnerability to attacks. Cunningham et al. distinguish between two separate dimensions of rebel strength representing power asymmetries between rebels and the government: the power to target or inflict costs on the government in the center, and the power to resist or evade government repression in the insurgent’s “home” territory in the periphery. Strength in the first dimension is associated with shorter conflicts, whereas rebels who address their power asymmetry along the second dimension fight longer wars. We argue that the recruitment of women may increase their offensive power but particularly enhance their defensive military capabilities, i.e. the power to resist government repression. Armed groups can then also strategically use women, influencing the length of a conflict. The decision to recruit women might be influenced by the structure of the armed group. Despite this potential interplay between group structure and the recruitment of women, we argue that the inclusion of women can independently lengthen the conflict via at least four interrelated mechanisms.

First, (male or female) membership is a critical resource for all violent groups, helping the organization to survive, sustain, and grow. One effective way to increase membership is to recruit women. Women constitute half of the available manpower resource. Recruitment is thus a method of conserving military capabilities and simultaneously denying the government access to human resources. It enables rebel groups to absorb a high level of damage before they are forced to surrender.
Second, like recruitment, retention is imperative for a rebel group’s survival. For military organizations, every desertion increases the risk of capture or death for the members that remain loyal. Desertion is then also an important mechanism by which armed conflict end. Existing research on the determinants of retention has examined the influence of geography, a shared religion or ethnicity, and the role of ideology. Various other (primarily qualitative) studies have shown that in addition to these factors, gender plays an important role. MacDonald, for instance, concludes that women are comparatively more committed to the cause of rebellion. This is largely because women face higher costs when joining and when the rebellion fails.

When joining armed groups, women break the often traditionally gender-specific roles pertaining that war and fighting is an exclusively masculine domain. Additionally, women are confronted with significant costs should the rebellion fail: they face comparatively greater stigmatization when returning to civilian life, and many Disarmament, Demobilization, and Reintegration programs ignore women associated with armed groups. Taking this into account, we argue that women are especially likely to maintain their allegiance due to the relatively high costs associated with entering and leaving the group.

The inclusion of women in rebel groups can also have a positive impact on the recruitment of new members and their allegiance. The presence of female recruits helps to increase political awareness among domestic and international audiences. They attract greater media coverage, which can legitimize a rebel group’s claim that they have broad social support for their cause. Moreover, previous studies have shown that the public presence of females in rebel groups signals both the severity of the conflict and the moral necessity of the rebel’s cause by implying that even society’s “most pacifistic” members have been forced to take up arms. This, in turn, can function as a symbolic value that may convince others to join. At the same time, the presence of women offers opportunities for male recruits to build various forms of relationships within the group, and as such decreases desertion rates. Donelly, for instance, shows that the Lord’s Resistance Army used their marriage system as a way of creating cohesion and counter potential desertion.

Third, and related to the second strength dimension of Cunningham et al., due to the large power asymmetry in the government’s favor, rebel groups must rely on the support of the civilian population for their survival. Civilians not only provide food and intelligence but can also help them to evade the government’s forces. Without this support, they will be easily defeated, and conflict tends to be short-lived. Studies have shown that women are particularly effective in creating such support networks: civilians prefer to interact with female recruits because they are seen as less threatening.

Lastly, scholars have emphasized the tactical and strategic advantages of recruiting women, a factor that can advance the group’s goals and increase the likelihood of long-term survival. They have argued that their ability to conceal themselves and avoid suspicion makes female combatants more effective and lethal. For instance, Bloom and recently Alakoc have shown that terrorist organizations often strategically deploy women in areas where gender stereotypes and restrictions inhibit suspicion of subversive activity or prevent body searches even when suspicion is aroused. In turn, the use of these irregular tactics facilitates the prolongation of armed conflict.
To summarize, we have developed four different but interrelated arguments indicating that the use of women by rebel groups can increase the duration of armed conflicts. Three of the four have a gender-specific character: the inclusion of women in rebel groups might positively influence recruitment and retention, it might create a stronger bond with the civilian population, and it might improve the military advantage of the rebel group. Although the lack of disaggregated data does not allow us to test each of these mechanisms directly and separately, we seek to examine the observable net effect that the use of female recruits by rebel groups is likely to increase the duration of civil conflict.

Research Design

**Dependent Variable and Data Structure**

The data structure and our information on conflict termination dates are based on the UCDP Armed Conflict Data, for which Kreutz has converted into a conflict termination dataset. With this information, we created a monadic data set combining conflicts, rebel organizations, and years, i.e. the armed (intrastate) conflict–rebel–year constitutes our unit of analysis. Based on this dataset, we compiled our dependent variable, conflict duration, measuring the number of years from the start (the first year in which the death toll in the conflict reached 25 battle-related deaths) to the end of the conflict (marked by a formal settlement or a decisive victory ending the conflict for at least two consecutive years). The descriptive statistics of this variable can be found in Table 1. In total, we obtain 886 conflict–rebel–years. Out of these observations, some are left-censored (i.e. the actual conflict start date is before 1 January 1989) and others are right-censored (i.e. termination did not take place before the last day of observation in the data, 31 December 2009). The problem due to left censoring is addressed by taking into account the actual start date of a conflict (which may go back until 1 January 1944) when calculating durations. The issue of right-censored cases is taken into account by our estimator, for which we directly specify that all cases that did not terminate by 31 December 2009 are indeed right-censored.

**Explanatory Variable**

To examine the potential association between female recruits and conflict duration, we need information on the number of women per rebel group. There are, however, very few datasets available that record this information. More specifically, the data that is available is primarily focused on female combatants i.e. defined as all female members who have undergone military training, received combat weapons, and participated in organized combat activities on behalf of an organization during the conflict. Consequently, although our theoretical argument might in many cases also apply to female rebels that are used solely in support functions, we test the association by primarily focusing on those women that are active in military functions. In the Appendix, we present some models in which we have proxied the number of women in support roles. The results remain – as we expected – robust.
Arguably the most prominent and comprehensive dataset to record the number of female combatants per rebel group is the WARD dataset (version 1.2) compiled by Wood and Thomas.71 WARD improves two existing datasets72 on this topic by including a larger sample of groups and providing estimates of female combatant prevalence. Moreover, it is more precise than the dataset created by Loken, who has coded the prevalence of female combatants per armed group type and not per armed group.73 WARD contains information on the prevalence of female combatants for 227 rebel organizations active between 1979 and 2009. As such, WARD covers more than 70% of cases included in the UCDP Dyadic Dataset.74 Important to note, however, is that this dataset does not provide information on the exact time of recruitment, making it difficult to analyze changes in the number of women recruited overtime.

For our independent variable, female combatants, we use an ordinal variable measuring the proportion of female members in a rebel group. This variable ranges from 0 to 3: the value of 0 denotes that there is no evidence of female combatants being included in the ranks; the values of 1 and 2 indicate a low (less than 5%) or moderate (between 5% and 20%) proportion of female combatants in the group, respectively; and the value of 3 specifies that more than 20% of the group consisted of female combatants.75

### Control Variables

We control for a broad set of alternative determinants of our dependent variable, i.e. conflict duration. These control variables are based on items previously identified in the literature.76 Most of these variables can also be seen as determinants of the recruitment of women by rebel groups. This is particularly important for our empirical models as we attempt to control for potential selection problems.77 The control variables can be categorized into three different clusters: country characteristics, conflict features, and rebel-group characteristics.

First, in line with Cunningham et al., for the cluster of country characteristics, we consider the form of government, ethnic and linguistic fractionalization, the economic situation, and population.78 The level of democracy is frequently employed in duration

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
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<td>0.425</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Conflict duration</td>
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<td>11.194</td>
<td>8.299</td>
<td>1</td>
<td>31</td>
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<tr>
<td>Female combatants</td>
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<td>0.973</td>
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<td>3</td>
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<tr>
<td>Democracy</td>
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<td>0.477</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ELF index</td>
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<td>0.587</td>
<td>0.209</td>
<td>0.161</td>
<td>1</td>
</tr>
<tr>
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<td>2.867</td>
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<td>20.903</td>
</tr>
<tr>
<td>GDP per capita (log)</td>
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<td>7.671</td>
<td>0.964</td>
<td>4.917</td>
<td>10.051</td>
</tr>
<tr>
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<td>0.463</td>
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<td>1</td>
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<tr>
<td>Competition</td>
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<td>0.676</td>
<td>0.468</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Rebel’s fighting capacity</td>
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<td>0.409</td>
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<td>1</td>
</tr>
<tr>
<td>Strength central control</td>
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<td>0.614</td>
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<td>3</td>
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<td>Territorial control</td>
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<td>0.498</td>
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<td>1</td>
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<tr>
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<td>0.211</td>
<td>0.408</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
studies, as democracy is considered to be the form of government most likely to be open to a negotiated settlement. Moreover, democracy levels are often associated with gender equality, which might, in turn, affect whether women participate in armed groups or not. To account for the level of Democracy, we employ a binary version of the polity2 item from the Polity IV dataset that takes the value of 1 (full democracy) for a polity2 value of +6 or higher (0 otherwise).

With regard to other country characteristics, Fearon and Laitin, among others, highlight the impact of ethnic and linguistic fractionalization on the onset of civil war. Such fractionalization could influence conflict duration. To control for this, we use Fearon and Laitin’s measure for ethnic and linguistic fractionalization (ELF index). Another country characteristic that might be of influence is the economic state of the country: an economic downturn could exacerbate grievances, which might in turn influence conflict duration. To control for this factor, we use Gleditsch’s measurement of GDP per capita (the natural logarithm). Additionally, we include the natural logarithm of a country’s Population size, which may affect conflict in various ways. This data also stems from Gleditsch.

Turning to the characteristics of the conflict, we control for conflict type and the number of rebel groups active in a dispute. Secessionist conflicts are more difficult to resolve and therefore usually last longer. To control for this issue, we use Cunningham et al. to construct a dichotomous variable coded as 1 for a secessionist conflict and as 0 otherwise. In addition to controlling for the type of conflict, we also employ Cunningham’s measure of Competition, as he demonstrates that when more actors participate in a conflict, it lasts longer. Furthermore, the greater the number of actors present, the greater the competition for the available human resources, including women. To control for this, we include a variable measuring whether other government-rebel dyads (and hence rebel groups) are active in the same conflict (coded as 1) or not (coded as 0).

We also include several controls for rebel group characteristics. This to make sure that the possible relationship between the recruitment of women and conflict duration is not solely caused by the structure of the armed group. First, we include a variable based on expert assessments of the fighting capacity of the rebel group vis-à-vis the government: we distinguish between a high capacity of the rebel group in comparison to the government (coded as 1) and a low capacity in comparison to the government forces (coded as 0). For this variable, we use the NSA dataset. The Rebel’s fighting capacity may influence the duration of the conflict, as strong rebel groups have been found to shorten conflicts.

Second, we control for the strength of the central command. This variable does not only proxy the level of hierarchy of the rebel group but also accounts for a rebel group’s strategy in recruitment. For this variable, we rely on the NSA dataset. The variable ranges from 1 (not strong central command) to 3 (a very strong central command).

Third, we determine whether a rebel group controlled territory. This influences not only a group’s mobilization capacity (it is highly correlated with mobilization capacity) but also its capability to hide from the government. To control for this possibility, we include a dichotomous variable, Territorial control, measuring the existence of territory under the control of the rebel group where they established permanent bases. To this
end, we use the NSA dataset\textsuperscript{92} to assign the variable a value of 1 if the rebel group controlled territory or 0 if it did not.

Lastly, Goldstein argues that women are especially likely to participate in rebel organizations that are inspired by leftist ideologies.\textsuperscript{93} To control for this, we employ an additional dichotomous variable *Leftist ideology*, taken from Wood and Thomas, which is coded as 1 if the rebel group’s ideology was based on leftist ideals (0 otherwise).\textsuperscript{94} This measure is not correlated with other included variables, such as secessionist conflict. Table 1 summarizes the descriptive statistics of all variables.

**Empirical Findings**

To examine the relationship between the inclusion of female combatants and the duration of armed conflict, we follow the empirical strategy of Haer and Böhmelt and use survival models.\textsuperscript{95} Since we do not impose a particular functional form on the baseline hazard of conflict termination, we use Cox proportional hazards models. We examined the Schoenfeld residuals for a violation of the proportionality assumption, but this assumption is met for each model. We cluster the standard errors on the conflict, taking into account potential intra-group correlations. In addition, we fit stratified Cox models, which allow the form of the underlying hazard function to vary across levels of stratification variables. Following the specifications in Cunningham et al. and Haer and Böhmelt, we use a conflict’s underlying issue areas (in our case, only ethnic conflict or coups d’état variation are available) as strata, which then controls for the fact that the salience of conflicts is likely to vary over issue area.\textsuperscript{96} The results can be found in Table 2.\textsuperscript{97}

Model 1 shows a simple bivariate relation. Model 2 looks specifically at the influence of group characteristics on conflict duration. This to exclude the idea that group characteristics determine conflict duration and not the inclusion of female combatants. Model 3 shows the full model and Model 4 shows the result of our stratified Cox model. We report non-exponentiated coefficients, where positive coefficients indicate an increasing hazard (shorter conflicts) and negative coefficients specify a decreasing hazard (longer conflicts). In the Appendix, we also show the hazard ratio of each model.

Regardless of our model specifications, female combatants have a negative and statistically significant effect, suggesting that the estimated risk of conflict termination decreases when rebel groups have female combatants. The hazard ratios show that a rise in female combatants by one unit reduces the estimated risk of conflict end by about 51%. Adding or dropping control variables does not change the substance of these findings. Hence, we can conclude that the integration of women into rebel groups is associated with an increase in the length of conflict.

Coming to our control variables, the results are in line with earlier studies both in terms of substance and significance.\textsuperscript{98} We focus our discussion on the statistically significant findings due to space limitations. For the country control variables, democracy, ethnic fractionalization and population size are particularly significant predictors of conflict duration. These results mirror those of Collier, Hoeffler, and Soderbom, Buhaug et al., Cunningham et al., and Haer and Böhmelt.\textsuperscript{99} Also, the control variables, secessionist conflict, leftist ideology, and the rebel group’s fighting capacity are significantly related to conflict duration. Conflicts in which it is about secessionism and in which rebel groups have
Female combatants take significantly longer to end. Important to note is that the relationship between female combatants and conflict duration remains statistically significant, even if we include several rebel group characteristics.

The Appendix describes several robustness checks that move beyond the presented models. Among others, we ran additional models on the importance of forced recruitment and gender inequality (both have very limited effect on conflict duration). Furthermore, we account for the potential nonrandom selection of female combatants, and we examined the relationship when removing those rebel groups that recruit large numbers of female combatants. The results of these models do not statistically differ from the findings presented here. Female combatants significantly increase the length of armed conflict. Lastly, we had a more in-depth look at the role of women within these armed groups. Even in case, women are solely used in support roles (and not in combat functions), conflicts are likely to take longer.

**Illustrative Case: The Maoist Insurgency in Nepal**

Although the statistical analysis demonstrates an association between female combatants and conflict duration, the nature of this relationship is best established through an “on-the-line” case study in which both variables are present i.e. an armed group
that survived for a long period of time in which female combatants were present. An example of such a case is the CPN-M. This group was founded by Pushpa Kamal Dahal in 1994 as a result of a split with the Communist Party of Nepal (Unity Center). It aimed to overthrow the Nepali monarchy in favor of a more democratic system that would decrease poverty and inequality.\(^{101}\) In 1996, it launched a guerrilla war and the group quickly established military basis in rural areas.\(^{102}\) As the war escalated, the Maoist started to attack the Nepalese army. There were some intermittent cease-fires in 2002. However, fighting continued through 2005, when the CPN-M sought a permanent peace accord by forming a pro-democratic alliance with several other mainstream political parties that wanted to end the Nepalese monarchy.\(^{103}\) However, in February 2005, the Nepali King took complete control of the government by dismissing the elected parliament. Public protests and pressure from opposition parties forced the King to reinstate the parliament in 2006. In that same year, a United Nation’s brokered peace brought the Maoist Insurgency to an end.\(^{104}\) During the ten-year insurgency, approximately 15,000 people were killed, many were wounded or internally displaced, and many civilians were (forcibly) recruited by the rebel group.\(^{105}\)

Interesting for our argument is the fact that the relatively long Maoist insurgency was recognized by a very high level of participation of women. As a communist movement, the CPN-M argued that their struggle would not be possible without the participation of oppressed groups, such as women.\(^{106}\) For instance, before the Maoist launched a guerrilla war, they presented a social agenda in which they pledged to end all forms of discriminations against women. More precisely, the memorandum demanded the end of patriarchal exploitation and discrimination against women and property right for the daughters.\(^{107}\) Also at the start of their guerrilla war, the CPN-M distributed leaflets all over the country, appealing women to join the insurgency to eliminate the oppressive system.\(^{108}\)

The importance of including women in the Maoist struggle can also be seen when looking at the number of female combatants involved in the insurgency. Some scholars have argued that the proportion of female combatants was as high as 40 or even 50%.\(^{109}\) While the rebel group did not keep a detailed record on the timing of recruitment, analysis of their published official statements and proclamations from the insurgency period, published memoirs of female ex-combatants\(^{110}\) and leaders,\(^{111}\) and academic studies,\(^{112}\) show that the decision to recruit women as combatants was made from the very start of the insurgency. Of course, their recruitment significantly increased as the Maoists started to expand their territory and organization beyond the areas of Central Nepal.\(^{113}\) Although many women were initially recruited in support roles, soon they took up combat roles.\(^{114}\)

Our illustrative study relies on 39 semi-structured interviews conducted in the period 2017 to 2018: 27 female ex-combatants, 4 experts (both female and male) on women combatants in the Maoist insurgency in Nepal, and 8 top Maoist leaders, including 6 female leaders). Some of these interviewers were conducted via snowball sampling (our interviewees referred us to others) or were organized with the help of a so-called ‘research broker’. We have borrowed the term ‘research broker’ from Parashar\(^{115}\) to denote a facilitator, a navigator, an enabler, a capacity builder who by affiliations and local knowledge introduces the researcher to the world of research
subjects. Relying on snowball sampling or on a research broker was unavoidable at times. However, we employed several tactics to ensure the representativeness of the received information and reduced the potential for bias. First, we conducted interviews with people from different backgrounds. That is, from different gender, caste, class, social status, and ethnicity. Second, we conducted these interviews in different parts of Nepal. We traveled to ten different (rural and urban) districts of Nepal sprawling from the East part of Nepal to the Mid-West, and from the mountainous North to the South. Third, we conducted the interviews in Nepali language, which we later translated into English by certified translators. Lastly, to reduce the potential bias that we might have encountered, we have corroborated in the analysis below the information given in the interviews with expert knowledge on the Nepali insurgency.

Overall, three themes emerged from these interviews: social cohesion, combat skills of female combatants, and the importance of women for the survival of the group. Important to note, is that these three were visible in the interviewees of both male and female interviewees.

First, mirroring our second theoretical mechanism, women in the CPN-M were extremely loyal and deeply committed to the cause of the insurgency. Reflecting on their past combat experience, many interviewees asserted that female combatants were less likely to surrender or to reveal essential information upon capture. A former female company commander stated:

> We did not surrender before enemies. Men might have surrendered. They let their weapons be taken away from them by the security forces, but women never did that. Many friends got caught and put into jail. Whatever would happen to us, despite much torture and many years of detention, we did not divulge the secret to them. Because of our participation, the people’s war benefitted a lot.

This was verified by the testimony of other female combatants. A high-ranking female Maoist leader emphasized during an interview: “They [women] were ready to die but they would not reveal any information. They would guard the confidentiality at any cost.”

Female combatants were especially likely to maintain their allegiance due to the relatively high costs associated with deserting the CPN-M: security forces could readily identify them as Maoists, and they could face torture, rape, and potential death. As one interviewee explained to us, “In the village, people would know that they had been with the Maoists. The army could have killed them. It was better to stay in the rebel group. They had to be in the group despite the hardships and difficulties.”

Beyond the risk to their security, the loyalty of female combatants was also conditioned by the relative lack of outside opportunities for women. Finding a job outside the insurgent group was extremely difficult due to a lack of education, a lack of proper documents (citizenship cards), and the labor restrictions on women in the Middle East (a common employment destination). A former female CPN-M commander recalled:

> There was no guarantee of their security even after forsaking war; therefore, they [female combatants] did not want to desert. Moreover, it was not possible for them to seek overseas employment. Thus, many female combatants thought that the war was the only alternative for them, and they stayed in the group.
Female CPN-M combatants clearly functioned as role models for others to join. As a former female Maoist leader explained:

In the beginning, there were no women in the police, the armed-police, or the army. Once we had them, they [members of the government] also started recruiting women. In some ways, women pulverized the arrogance in men that women cannot fight. Women started shining in such a way that men had to ask them not to fight. If they had fought recklessly, we would have lost our best fighters.  

The interviews also demonstrate that the inclusion of women had a positive impact on cohesion within the CPN-M and the allegiance of men. Our interviewees emphasized, for instance, the strong bonds that existed between male and female combatants: “They used to call us sisters, and we used to call them brothers. We lived together like a family. We did not find that attitude [hostility towards women combatants] in the cantonment.” Similarly, it was suggested by many interviewees that male and female combatants supported one another throughout the insurgency which mirrors the conclusion of Riley. A former female combatant described the situation:

While fighting together, men and women had each other for support. Women also gained self-confidence that they could fight, too. Men were also able to succeed without loss. Therefore, it helped both. Making it easier and more comfortable for both.

This mutual respect and gender equality, not widespread in Nepali society, encouraged more people to join: “I did not feel discrimination and bad behavior in the group. There was equal behavior. Many [women] joined because of inequality in the villages, to find equality.”

The CPN-M also allowed relationships and marriages between combatants. These so-called libidinal policies are considered by some scholars to be the driving force behind the Maoist insurgency. In line with our theoretical expectation, a high-ranking male Maoist leader explained: “In many cases, because of women, men stayed in the group. Whole families were devoted to the party.” More specifically, the CPN-M eliminated puritanical restrictions on marriage by banning castes and the dowry system, meaning that marriage was within reach for everyone as long as they followed the Maoist governing ethos. As a result, many single young men joined the CPN-M:

I think that if a married combatant, went home, he/she might not return. This cannot sustain the war. If they could express their love in the rebel group and if they were allowed to get married there [in the rebel group], it [war] becomes sustainable.

In line with our theoretical expectations, the recruitment of women provided the CPN-M with certain crucial tactical and strategic advantages. According to our interviewees, this was most evident in relation to intelligence gathering. Women were not considered to be a security threat and could extract information from the male-dominated
Nepali army and police with relative ease. In line with our fourth identified mechanism, a female combatant elaborated, “Our party used mostly women. Because it was easier for them.” She elaborated it further:

In some cases, women were given more priority in activities such as intelligence gathering. It was easier for women because this society thinks that only men are considered to be thieves. Our male colleagues used to be searched at the army checkpoints; however, I was not. In addition to their impacts on retention and allegiance and tactical and strategic success, female combatants in the CPN-M also significantly influenced the level of public support, which proved instrumental for the survival of the insurgency. Our interviews show that the CPN-M was aware that the everyday network between women was vital for its functioning. For instance, the group made the presence of at least one female member in each community mandatory. These female members were vital, creating and sustaining a bond between the CPN-M and local civilian communities. As one of our interviewees argued:

I guess there is a tendency to feel much safer with female combatants around, even though they are equally trained to kill as violently as the males. But, you know, like, when they went into villages to take shelter... For matters like those, it helped to have women around because people could have a sense of security that they could relate to. To have female combatants also in this group of people who have come and asked for shelter and food certainly would have made a difference in the relationship with the rebels.

Moreover, it was women in particular who supported the rebel group by, for instance, feeding the combatants and housing them:

While in battle, people had to support us, managing our logistics. They had to carry captured weapons. They had to supply weapons during the war when they ran out. People supported us through food, shelter, and so many things. Most of them were women. This was the foundation of the PLA.

Some interviewees even asserted that the presence of women in the armed group convinced people that the Maoists were no different from themselves, creating closer links between the CPN-M and communities. A former female fighter postulated, “Without them [women], it would have been a roving guerrilla cut off from the people. It would have been incomplete... And, it would not have lasted as long.”

In summary, our brief illustrative case study demonstrates that the incorporation of female combatants into the Maoist insurgency in Nepal helped the CPN-M to increase their number of recruits and reinforced their tactical advantages; most importantly, it enhanced retention and allegiance. Additionally, it improved the group’s relationships with communities, thereby increasing its likelihood of survival and its ability to oppose the Nepali government.

**Conclusion**

This study set out to explore the association between the inclusion of female combatants and conflict duration. We argued that the recruitment of women by rebel groups decreases the power asymmetry between the rebel group and the government, resulting
in longer conflicts via four interrelated mechanisms. First, incorporating women into a rebel group increases the human resource pool for the group. Second, it can enhance the group's tactical advantages: women can more easily conceal themselves and avoid suspicion. Third, female recruits are less likely to desert due to the relatively high costs associated with leaving the group in comparison to men. At the same time, they have a positive impact on the recruitment of men and their level of allegiance. Lastly, they can produce significant political utility by especially strengthening the relationship between the rebel group and the civilian population, an essential factor for the group's survival and the sustenance of the conflict.

To examine this relationship, we employed two research strategies. First, we quantitatively combined information on female combatants (i.e. those that have a combat function) with conflict duration data. The statistical analysis shows a significant positive association: the inclusion of female combatants in a rebel group is associated with longer conflicts. Second, we examined this relationship in greater depth through interviews held with former female Maoist combatants, their leaders and commanders, and several experts on the CPN-M rebellion in Nepal. These interviews establish the presence of each of the hypothesized causal mechanisms.

Further research is, however, needed to overcome some of the limitations of this study. First, our current quantitative measure of female combatants is unable to fully account for temporal variations. To be more precise, we lack information about the variation in the number of female combatants overtime per rebel group, making it difficult to determine a direct causal effect. Consequently, based on the statistical analysis only, it is difficult to rule out reverse causality. However, the illustrative case of the CPN-M in Nepal, suggests that women were recruited to be soldiers from the early stages of the conflict onward.139 Notwithstanding, future research might focus on how the timing of recruitment is affected by the duration of the conflict.

Second, our quantitative measures for the integration of women into rebel groups focus on those serving as combatants, thereby neglecting the fact that in many rebel groups, women work exclusively in support roles. Although our theoretical arguments do not clearly differentiate between those women active in military functions and those that are employed in support function, future research should attempt to make such a theoretical and empirical distinction. Similarly, with our measures, we were not able to explore each potential causal mechanism. For instance, we were unable to quantify the level of commitment of women and how this affects their retention. This warrants further exploration.

Third, theoretically it might also be interesting to examine the strategic use of everyday network between women by rebel groups in more detail. Our illustrative case of the CPN-M show that this network was crucial for the survival of the group. However, additional research should not only examine whether these networks are also used by other rebel groups, but also how these networks are used.

Lastly, it is important to note that this study does not attempt to say anything about the long-term positive externalities of the inclusion of female combatants. Very few studies have examined the role of women in general and former female combatants, in post-conflict societies. The existing studies show that on the one hand, female combatants are ostracized and marginalized in many post-conflict societies140 but at
the same time that they their involvement in peace negotiations might lead to durable peace. Future studies might then also explore this potential field of tension in more detail. As Donelly argues, we cannot understand the role of women in post-conflict societies without understanding their role during conflict.

Regarding policy implications, our work highlights the importance of the composition of rebel groups. Among possible responses, states and (national and international) organizations could seek to make it less attractive for women to join or stay in rebel groups. First, polices need to be designed and implemented that prevent the recruitment of women in rebel groups in the first place. As our CPN-M case shows, important reasons for women (and men) to join the Nepali insurgency was not only gender imbalance in society, the lack of democracy, but also economic issues. Each of these motivating factors need to be in the center of policies focused on disincentivizing women joining these groups. Second, as shown in our analyses, female combatants were especially likely to maintain their allegiance due to the relatively high costs associated with deserting the group. Implementing policies that address this issue during and after the conflict, might attenuate the high levels of retainment.

For example, the Gender, Peace and Security Unit of the United Nations, which oversees the implementation of the Women Peace and Security Agenda, can help governments and organizations with designing and implementing gender-sensitive policy interventions during and in the aftermath of the armed conflict that seek to rehabilitate and rehabilitate female ex-combatants into the community. In sum, the policy community should not only focus on disincentivizing the initial recruitment of women but at the same time making it easier for women to leave the groups, once recruited.

Notes


5. Lyall, “Do democracies make inferior counterinsurgents?”


11. We are aware of the fact that this reasoning might also hold for governments. However, we argue that because rebel group start from scratch, often facing resource constraints and legitimacy issues relative to the state, the inclusion of female combatants has a much greater effect.

12. Wood and Thomas, “Women on the frontline”.

13. Ibid.


16. Pilster and Böhmelt, “Predicting the duration”.


20. Pilster and Böhmelt, “Predicting the duration”; Fearon, “Why do some civil wars”.


25. Humphreys and Weinstein, “Handling and manhandling”.
29. Thomas and Bond, “Women’s participation”.
32. Thomas and Bond, “Women’s participation”.
34. Thomas and Bond, “Women’s participation”.
37. Cunningham, Gleditsch, and Salehyan, “It takes two”, 574.
38. Ibid.
39. Ibid.
41. Ibid.
42. Because of this potential interplay, we present in our analysis several models in which we control for different armed group characteristics.
45. Gates, “Membership matters”.
53. It is important to note, however, that the recruitment of women can also have a negative impact. For some groups, recruiting women might cause internal rifts due to, for instance, religious reasons. However, Thomas and Bond “Women’s participation” argue that although the strategy of recruiting women to increase membership runs the risk of losing unsympathetic followers, organizations that promote gender inclusiveness are likely to incur fewer costs in terms of the time and effort required to socialize new members.
56. Manekin and Wood, “Framing the Narrative”.
60. Cunningham, Gleditsch, and Salehyan, “It takes two”, 575.

64. See among others, Lindsey O’Rourke, “What’s Special about Female Suicide Terrorism?” Security Studies 18, no. 4 (2009): 681–718; Thomas and Bond, “Women’s participation”.


70. Wood and Thomas, “Women on the frontline”.

71. Wood and Thomas, “Women on the frontline”.


74. Lotta Harbom, Erik Melander, and Wallensteen Peter, “Dyadic Dimensions of Armed Conflict, 1946-2007,” Journal of Peace Research 45, no. 5 (2008): 697–710. The missing cases represent instances in which the researchers were simply unable to find sufficient information to make any designation regarding women’s participation. Typically, these represent small groups or those that existed for only short periods and for which very little information of any type is available (see codebook of Wood and Thomas, “Women on the frontline”).

75. For more information on the coding of this particular variable, see Wood and Thomas (2017).


77. We have also calculated selection models. The models can be found in the Appendix.

78. Cunningham, Gleditsch, and Salehyan, “It takes two”.

79. See among others: Pilster and Böhmerl, “Predicting the duration”.


83. Ibid.


85. Ibid.


88. Cunningham, “Veto players”; Cunningham, “Blocking resolution”.
89. Cunningham, Gleditsch, and Salehyan, “It takes two”; Cunningham, Gleditsch, and Salehyan, “Non-state actors”.
90. Cunningham, Gleditsch, and Salehyan, “It takes two”.
91. Cunningham, Gleditsch, and Salehyan, “It takes two”; Cunningham, Gleditsch, and Salehyan, “Non-state actors”.
92. Ibid.
93. Goldstein, War and Gender; Henshaw, “Where women rebel”; Thomas and Bond, “Women’s participation”.
94. Wood and Thomas, “Women on the frontline”.
95. Haer and Böhmelt, “Child Soldiers Prolong Civil Wars?”
97. For all models, we calculate the variation inflation factors (VIFs). All explanatory variables are well below the applied threshold level of 5, indicating that there is not much overlap or correlation between any of them. The results can be found in the Appendix. See Robert M. O’Brien, “A Caution Regarding Rules of Thumb for Variance Inflation Factors,” Quality & Quantity 41, no. 5 (2007): 673–90 for more information.
98. Cunningham, Gleditsch, and Salehyan, “It takes two”; Haer and Böhmelt, “Child Soldiers Prolong Civil Wars?”
106. Yami, People’s War.
108. Ibid., 193.
110. See Karki and David Seddon, The People’s War for a in-depth discussion of the Maoist demands.Tara Rai, A Diary of a Young Guerrilla Woman, a Collection of Memoir Essays (Kathmandu: Ratna Pustak Bhandar, 2010).
112. Israelsen, “Why now?”
116. These districts were Rolpa, Rukum, Banke, Dang, Arghakhanchi, Rupandehi, Chitwan, Sunsari, Lalitpur, and Kathmandu.
118. Interview date: January 5, 2018.
119. Interview date: December 21, 2017.
121. Interview date: January 5, 2018.
122. Adhikari, “Women in Conflict”.
123. Interview date: December 12, 2017.
125. Interview date: January 5, 2018.
127. Interview date: January 5, 2018.
128. Interview date: January 5, 2018.
130. Interview date: January 05, 2018.
132. Interview date: November 21, 2017.
133. Interview date: January 06, 2018.
134. Adhikari, “Women in Conflict”.
136. Interview date: November 21, 2017.
137. The PLA (People’s Liberation Army) was the armed wing of the CPN-M. Interview date: December 21, 2017.
139. See also Israelsen, “Why now? who argues that conflict duration and intensity may not always result in recruitment of women combatants.
141. Krause, Krause, and Bränfors, “Women’s Participation in Peace Negotiations”.
142. Donnelly, “The Interactive Relationship”.

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