



Could rebel child soldiers prolong civil wars?

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Abstract

While we know why rebels may recruit children for their cause, our understanding of the consequences of child soldiering by non-state armed groups remains limited. The following research contributes to addressing this by examining how rebels' child recruitment practice affects the duration of internal armed conflicts. We advance the argument that child soldiering increases the strength of rebel organizations vis-a-vis the government. This, in turn, lowers the capability asymmetry between these non-state actors and the incumbent, allowing the former to sustain dispute. Ultimately, the duration of armed conflicts is likely to be prolonged. We analyse this relationship with quantitative data on child soldier recruitment by rebel groups in the post-1989 period. The results confirm our main hypothesis: disputes are substantially longer when rebels recruit children. This work has important implications for the study of armed conflicts, conflict duration and our understanding of child soldiering.

Keywords

Child soldiers, civil war, conflict duration, event history models

Introduction

Child soldiering is not a new phenomenon (Wessells, 2006), but its practice has altered dramatically over the last few decades (Brett and McCallin, 1998). The number of children involved in conflict is growing, and their contribution has changed as they are often used as active belligerents in war, instead of being only recruited for supportive functions such as cooking or carrying loads (Gates, 2011: 31; Gates and Reich, 2010; Machel, 1996; Maclure and Denov, 2006: 119; Singer, 2006).¹ Clearly, child soldiering is a severe case of the deprivation of children's human rights, and it is important to advance our understanding of its determinants and consequences in order to provide politicians and public institutions with a more systematic foundation for decision-making that can effectively address this problem.

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Although state military organizations also make use of children, this study focuses on the *consequences of rebel groups' child soldiering*, as rebels usually have fewer constraints in, and more to gain from, using child soldiers (Tynes and Early, 2015).² We argue that rebel groups' use of children additionally helps to explain the duration of civil wars. There is anecdotal evidence that suggests that child soldiering might indeed affect conflict duration. Brett and McCallin were some of the first to argue that 'the continuous involvement of child soldiers in war can be a cause of further deterioration in the security situation in future.... The extensive involvements of children as combatants may in itself be a significant factor in prolonging the conflict' (Brett and McCallin, 1998: 37). However, Achvarina and Reich conclude that there is 'little relationship between duration and the use of child soldiers in cases where we were definitive about their use' Achvarina and Reich (2006: 143). While these works provide some initial insights and a starting point for our study, a more systematic analysis, which goes beyond single case studies (Singer, 2006) or research on constrained samples of child soldier cases alone (Achvarina and Reich, 2006), is necessary to thoroughly understand the relationship between child soldiering and conflict duration. To this end, the next section discusses the previous literature on child soldiering and conflict duration. We then develop a theoretical framework in four steps arguing for a conflict-prolonging effect of rebel groups' child soldiers on the duration of armed conflict. The net effect of these arguments is studied empirically using data on rebels' child soldier usage in conflict years between 1989 and 2003.³

The conclusion of this study is that civil wars have a significantly and substantially longer duration if rebels recruit and use child soldiers. This conclusion has important implications for our understanding of civil war dynamics as well as for our understanding of child soldiering. First, this result contributes to the vast literature on the determinants of civil war durations that, thus far, has not systematically acknowledged the additional influence of child soldiering practices. Second, conflict duration is a key factor of conflict intractability influencing the economic and human costs of war (e.g. Bennett and Stam, 1996). Cunningham (2006, 2010), for example, estimates that, for each extra month of civil war, an additional 189 casualties are observed. Knowing which variables increase or decrease the duration of a conflict may help policymakers and scholars alike to gain a better assessment of the possible risks and costs involved. Moreover, insights on the duration of armed conflicts could facilitate the anticipation of the likelihood of military interventions or whether neighbouring countries will be destabilized (see Pilster and Böhmelt, 2014). Finally, by showing that this relationship is statistically and substantively significant, we also inform the existing literature on the *determinants* of child soldiering (e.g. Lasley and Thyne, 2015).

Child soldiers, civil war and conflict duration

Child soldiering

Existing studies on child soldiers (e.g. Blattman and Annan, 2010; Brett and Specht, 2004; Honwana, 2006; Lasley and Thyne, 2014; Singer, 2006; Tynes and Early, 2015) can be divided into three broad literature strands. First, some scholars focus primarily

on the *determinants* of child soldiering, i.e. those factors that increase or decrease of children joining armed groups during conflict in the first place. Honwana (2006), for example, argues that due to globalization and civil wars, social structures are disrupted that would have otherwise protected children from recruitment efforts. And Rosen (2005) emphasizes the influence of security on the children's decision to join armed groups. Others focus more on identifying the factors that drive rebel groups to recruit children (also called the supply-side of child soldiering). Beber and Blattman (2013), for instance, argue that it is easier to indoctrinate and mislead children, and that they are cheaper to retain and more responsive to coercive methods.⁴ Lastly, there is a literature strand on the *consequences* of child soldiering. Veale and Stavrou (2007), for instance, explored the issue of changing identities of child soldiers due to abduction and its effect on reintegration. Others like Dickson-Gómez (2002), Berkowitz (1993) and Bandura (1973) examined how social learning processes influence the mental and behaviour changes that a child undergoes in the context of war. Punamäki (1987), for instance, analyses the level of aggression among Palestinian and Israeli children, and concludes that children exposed to war stressors frequently display more aggressive behaviour. Others, such as Blattman and Annan (2010), find that rebels' child soldier recruitment has a negative impact on their post-conflict earnings, which is also confirmed by qualitative research on recruitment practices in Mozambique and El Salvador (Boothby et al., 2006; Santacruz and Arana, 2002).

Additionally, there is a growing body of research that focuses on the effective reintegration of child soldiers after war, especially in the context of Disarmament, Demobilization and Reintegration (DDR) programmes. Utas (2011) describes how former child soldiers in Liberia use the victim label for accessing reintegration support. Moreover, Halton (2011) looked from a practitioner perspective at the reintegration process. He reports from his experience in Sudan that it is important to have a strong enforcement of the reintegration process at the local level. Somewhat surprisingly, however, we know relatively little about the consequences of child soldiering on *conflict dynamics and society in general*. There are only a few notable exceptions that explicitly focus on their impact. Bakaki and Hinkkainen (2016) empirically demonstrate that child soldiering in civil war increases the likelihood of peacekeeping interventions. Haer and Böhmelt (2016a, 2016b) find that child soldiers might improve the military effectiveness of rebel organizations, but ultimately have a very detrimental impact on post-conflict peace. However, none of these studies address the underlying phenomenon that may influence all these outcomes, i.e. the impact of rebel groups' child soldiering on the duration of conflicts.⁵

Armed conflict duration

Civil wars, insurgencies, and, more generally, domestic armed conflicts remarkably vary in how long they last (e.g. Cunningham, 2006, 2010; Fearon, 2004; Lyall, 2010; Wucherpfennig et al., 2012). Studies explaining this variation primarily rely on the idea that conflicts continue if at least one of the belligerents believes that the dispute is more beneficial than peace (e.g. Collier and Hoeffler, 2004; Cunningham, 2006, 2010; Fearon, 2004; Hegre, 2004; Hegre and Sambanis, 2006; Regan, 2002; Wucherpfennig et al.,

2012). This cost–benefit calculation depends in large parts on available information concerning the actors’ private capabilities. The information about belligerents’ capabilities is then (partly) revealed over the course of fighting. Hence, conflict duration depends on how fast the actors are *able* and *willing* to reveal information (Most and Starr, 1989; Starr, 1978). Within this framework, most studies have focused on four clusters, each of them generating different predictions about which factor is likely to make conflicts shorter or longer: (1) physical terrain and geography; (2) cultural and ethnic influences; (3) rebel power; and (4) state power (e.g. Collier et al., 2004; Fearon, 2004; Hegre and Sambanis, 2006; Lyall, 2010; Pilster and Böhmelt, 2014).

None of the existing studies on conflict duration, however, have touched upon the influence of child soldiers and how they could affect conflict duration. To address this, we develop our theoretical idea in the following section, linking rebels’ child recruitment to the duration of intrastate-armed conflict.

Could rebel child soldiers affect civil war durations? Theoretical arguments

The dominant framework for examining the duration of armed conflicts relies on actors’ willingness and opportunity. While willingness pertains to the resolve and intention of the actors to continue fighting, opportunity stands for the available possibilities, resources and abilities to actually do so. We argue that rebels’ child-soldier recruitment is related to the opportunity as well as the willingness to continue fighting and, thus, an important determinant of conflict duration.

Our argument is based on the assumption that there is usually a power asymmetry between rebel groups and governments, i.e. rebels are typically weaker (Cunningham et al., 2009, 2013). This assumption is justified in light of Cunningham et al.’s (2009, 2013) Non-State Actor dataset (NSA). According to these data, rebels were much stronger, stronger or equally as strong as the government in only about 13 percent of cases. In the vast majority of coded rebel organizations (about 87 percent), they were weaker or much weaker than the government.⁶

Note, however, that Cunningham et al. distinguish between two separate dimensions of rebel strength and, therefore, power asymmetries between rebels and the government: ‘offensive strength, or the ability to inflict costs on a government in the centre, and the ability to resist or evade government repression in the insurgent’s “home” territory in the periphery and the underground’ Cunningham et al. (2009: 575). While rebels who are stronger on the first dimension are associated with shorter conflicts, rebels who address their power asymmetry on the second dimension fight longer wars.⁷ Due to the fact that rebel groups generally have an *ex ante* lower probability of winning a conflict militarily, they seek to address this capability asymmetry quickly. One way of doing so can be via the recruitment of minors (Tynes and Early, 2015: 87)

We argue that child soldiering primarily affects the power asymmetry on Cunningham et al.’s (2009: 575) second dimension, i.e. child soldiers improve rebels’ ability to resist government repression on the periphery and in the underground. The opportunity and willingness to continue fighting via child soldiering and, thus, to lengthen an armed conflict with a more powerful governmental adversary is then given by at least four

interrelated mechanisms. First, even if recruited children only provide non-combat related services,⁸ children are more adaptable, obedient and are less likely to desert than adults (e.g. Beber and Blattman, 2013; Gates and Reich, 2010; Schauer and Elbert, 2010: 316). In other words, children possess certain characteristics that make them more likely to sustain their fight against the government, which in turn might increase the duration of a conflict.⁹

Second, by recruiting children, rebels can address personnel shortages.¹⁰ Recruitment is a way of conserving military capabilities and, at the same time, denying the government access to human resources (e.g. Brett et al., 1996; Gates, 2011; Podder, 2011; Singer, 2006; Tynes and Early, 2015; Wessells, 2006). By drafting new, adolescent recruits, even if they are not able to fulfil fighting functions, rebel groups are more able to absorb a high level of damage before being forced to give up (e.g. Bennett and Stam, 1996; Gates and Reich, 2010; Mason and Fett, 1996).

Third, in line with the core idea of the second strength dimension of Cunningham et al. (2009: 575), child soldiering can also be used as a stalling tactic or stopgap measure. By accessing a new source of recruits, rebel groups can regroup and rebuild their own forces, which again leads to a longer conflict (see also Singer, 2006; Tynes and Early, 2015). For example, mercenaries from the private military company Executive Outcomes forced the Revolutionary United Front (RUF) in Sierra Leone into retreat. However, the rebels used children to regroup and rebuild their manpower, allowing them to continue fighting. Based on this illustration, decisive and complete victory over groups that use children might be more difficult to achieve (see also Singer, 2006: 97).

While the previous paragraphs dealt with the relationship between child soldiers and conflict duration from an opportunity perspective, we also contend that there is at least one mechanism pertaining to the willingness side of the theoretical framework. Specifically, the use of children during a conflict may make it more difficult to reach a peace agreement or negotiated settlement, as child soldiering harms the post-conflict commitment to peace (Haer and Böhmelt, 2016a; see also Cunningham et al., 2009: 575). Children are frequently not included in DDR programmes, which could make re-mobilization easier (Banholzer, 2014). Moreover, when child-centred DDR programmes exist, they often suffer from a variety of problems, which makes former child soldiers vulnerable for re-recruitment (e.g. Haer and Böhmelt, 2016a; Lee, 2009; Peters and Richards, 1998; Shepler, 2005; Singer, 2006). For instance, the Coalition to Stop the Use of Child Soldiers (2004) argues that the Burundian *Forces Nationales de Libération* (FNL) and the *Conseil National Pour la Défense de la Démocratie–Forces pour la Défense de la Démocratie* (CNDD–FDD) undertook massive child recruitment to increase their numbers for gaining recognition and bargaining power just before peace negotiations took place. This bargaining power then made it more difficult to reach any kind of agreement, and the conflict went on.

To recap, we developed several different, but interrelated arguments suggesting that rebel child soldiering will increase the duration of armed conflicts. While the lack of micro-level, disaggregated data does not allow us to test each of these mechanisms directly, we examine the observable net effect that *child soldiering by rebel groups is likely to increase the duration of civil wars*.¹¹ In the next section, we use quantitative data and methods to shed empirical light on this general expectation.

Research design

Dependent variable and methodology

We compiled a quantitative data set that comprises information on civil wars, rebel groups and their child soldiering practices. While the child soldier data stem from a relatively new data source (Haer and Böhmelt, 2016a, 2016b), all other data sets are virtually standard in the literature and commonly used. The data structure and our information on conflict-termination dates are based on the Uppsala Conflict Data Program/Peace Research Institute Oslo (UCDP/PRIO) Armed Conflict Data (Gleditsch et al., 2002), for which Kreutz (2010) coded start and end dates for the included conflicts. 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.

We define the dependent variable as the time between the outbreak of a conflict and its termination. Thereby, we focus on conflict duration, which can also be seen as a parsimonious operationalization for conflict intractability. After accounting for missing values, our sample covers 133 conflicts with 199 different rebel groups in 72 countries between 1989 and 2003. Conflicts are included in the data set when they were ongoing on 1 January 1989 or as soon as they break out afterwards during the period 1989–2003. Each state–rebel pair leaves the data in the year the respective conflict is over as identified by Kreutz's (2010) termination variable.

In total, we obtain 783 conflict–rebel–years. Out of these observations, 45 cases are left censored (i.e. the actual conflict start date is before 1 January 1989) and 36 cases are right censored (i.e. termination did not take place before the last day of observation in the data, 31 December 2003). 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 2003 are indeed right-censored.¹²

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. Finally, next to our regular models, 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. (2009), 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 (see also Wucherpfennig et al., 2012).

Explanatory variable: rebel groups' child soldiering practice

While rebel groups are not the only organizations that recruit child soldiers (Gates and Reich, 2010; Tynes and Early, 2015), we focus on these non-state actors and rely on arguably the most comprehensive data on child soldiering, as compiled by Haer and Böhmelt (2016a, 2016b). We employ two different variables from this data, each measuring the

use of children by rebels. First, there is an *ordinal child soldier variable*, which is coded as 0 if a rebel group did not use child soldiers at all in a specific conflict–rebel dyad, coded as 1 if a rebel group used a few child soldiers in a specific conflict–rebel dyad (i.e. less than 50 percent of the overall group size), and coded as 2 if a rebel group used many child soldiers in a specific conflict–rebel dyad (i.e. more than 50 percent of the group size). Second, we also consider a *binary variable for child soldiering*. This item captures whether the rebel group had child soldiers (1) or not (0) in a conflict–rebel year.

Relying on these two different items and, hence, model specifications ensures the robustness of our findings. Using the dichotomous child soldier variable also avoids the risk of making wrong assumptions about the actual size of child soldiering, since some coding might be affected by coding errors. In Appendix 1 we provide more information about the original data set's coding process, procedures, sources and the potential bias in the collected data (based on Haer and Böhmelt, 2016b).

Control variables

We control for a broad set of alternative determinants of our dependent variable, i.e. conflict duration. These controls are based on Cunningham et al.'s (2009) work, and mirrors those items used by Wucherpfennig et al. (2012). Most of these controls can also be seen as correlates with child soldier recruitment, i.e. we control for observable determinants of child soldiering as well. The latter is particularly important for our empirical models in light of controlling for possible selection problems, i.e. the first stage of rebels' decision to recruit children.¹³ These control variables can be categorized under three different clusters: country characteristics, conflict features and rebel-group items. These clusters mirror those identified in the literature review above (e.g. Collier et al., 2004; Cunningham et al., 2009; Fearon, 2004; Hegre and Sambanis, 2006; Lyall, 2010; Pilster and Böhmelt, 2014; Wucherpfennig et al., 2012).

First, in line with Cunningham et al. (2009), we consider the form of government, the economic situation, ethnic and linguistic fractionalization, and population for the cluster of country characteristics. The level of *democracy* is frequently used in duration studies (Fearon, 2004; Hegre and Sambanis, 2006; Pilster and Böhmelt, 2014) as being the form of government that is likely to be most open to a negotiated settlement. Democracy may also affect child soldiering practices as it could decrease incentives to recruit adolescent soldiers due to reputational concerns (Tynes and Early, 2015: 90f). We employ a binary version of the *polity2* item from the Polity IV data set (Marshall and Jaggers, 2004), which receives the value of 1 (full democracy) for a *polity2* value of +6 or higher (0 otherwise).

The economic condition of a country is captured with the natural logarithm of a state's *GDP per capita* in a given year. The data for this item are taken from Gleditsch (2002), while its theoretical rationale is twofold: the economic development of a country is not only one of the most robust predictors in the civil conflict literature (Ward et al., 2010), but may also affect the likelihood of child recruitment (Tynes, 2011: 93) as child soldiering might be more prevalent in weaker states (Collier et al., 2004). We also include the natural logarithm of a country's *population* that pertains to both conflict dynamics (Ward et al., 2010) (i.e. a larger population signifies a larger pool of potential

recruits for either the government or the rebels, which prolongs civil conflict) and Dallaire's (2011) claim that overpopulation made children 'cheap' recruits. The data stem from Gleditsch (2002) as well.

Finally, Fearon and Laitin (2003), among others, highlight the importance of ethnic and linguistic fractionalization for civil war onset, which may also affect conflict duration. This factor could fuel grievances toward the state and, depending on their strength, might influence the duration. In addition, enlistment of children might also be influenced by social pressure exercised by family and friends due to ethnic identification (Achvarina and Reich, 2006; Becker, 2010; Brett and Specht, 2004; Cohn and Goodwin-Gill, 1994). We include Fearon and Laitin's (2003) measures for ethnic and linguistic fractionalization (*ELF index*), which captures possible cultural and ethnic influences by measuring the probability that two randomly selected individuals belong to different ethnic groups.¹⁴

Coming to the characteristics of a conflict, we control for conflict type and the number of rebel groups active in a dispute. Cunningham et al. (2009) distinguish between *Coups d'état* and *Ethnic conflicts*. Coups are by default shorter conflicts (Fearon, 2004), while the literature shows that ethnic disputes are more difficult to settle and therefore usually take longer (e.g. Rothman and Olson, 2001; Walter, 2002). In addition, it may be easier to recruit from one's own ethnic group, or moral or social constraints against recruiting children may be more relaxed if rebels abduct and coerce members of other ethnic groups to fight for them. Furthermore, Cunningham (2006, 2010) demonstrates that the more actors participate in a conflict, the longer it lasts. The effect on child soldiering is given by rebel groups' competing over recruiting children for their organizations. We include Cunningham et al.'s (2009) measure *Two or more dyads*, i.e. whether other government–rebel dyads (and, hence, rebel groups) are active in the same conflict.

The last cluster controls for the characteristics of rebel groups. We again follow Cunningham et al. (2009, 2013) and consider measures that control for the possibility that rebels might recruit child soldiers because they would otherwise lose. Finally, as Cunningham et al. (2009, 2013) note, all these group-related variables are likely to affect conflict duration, although their effect varies depending on whether they pertain to the 'offensive strength' dimension or the dimension on 'the ability to resist or evade government repression'. At the most aggregated level, we include variables based on expert assessments measuring the *strength of a rebel group* vis-a-vis the government: we distinguish between weaker, equally strong and stronger rebel groups, using 'weaker rebels' as the baseline category. These aggregated variables can be disaggregated along four different items, however.

First, there is *Strong central command*, which measures the extent to which a central command exercises control over the constituent groups of an insurgent movement. We employ a binary variable that receives the value of 1 for stronger command structures of rebel forces in comparison to the government. Second, we consider a dichotomous variable for a rebel group's *Mobilization capacity*. When subscribing to the claim that child and adult soldiers are complements rather than substitutes, rebel groups that have the ability to recruit a larger number of fighters are not only more likely to draft child soldiers, but also 'present a clear threat to governments and engage in direct attacks' (Cunningham et al., 2009: 580). Third, Cunningham et al. (2009: 580) suggest that

'insurgents that have high capacity to procure arms should be better able to effectively target governments'. We, therefore, also incorporate their binary *High arms-procurement capacity* variable. Fourth, we use the *High fighting capacity* variable in order to operationalize a rebel group's fighting capacity relative to the government (Cunningham et al., 2009: 580). This variable measures the fighting capacity of a rebel group relative to the government on a dichotomous scale: low (0) or high (1).

We also control for two final rebel characteristics that do not belong to their strength or military capabilities relative to the government, but may be equally important. First, there is a dichotomous variable measuring whether a rebel group controls any *territory* (1) or not (0). Territory provides rebels with a variety of (human) resources and shelter from the government's authorities, which may influence conflict duration. Finally, conflicts are likely to be shorter when rebels have greater opportunities to substitute non-violent activities for violent ones (Cunningham et al., 2009: 580). The NSA data provide information on whether rebels have an acknowledged *political wing*, and whether the political wing is legal (i.e. accepted by the government). Against this background, we use a binary variable on whether such a wing does or does not exist. Appendix 1 provides the descriptive statistics of the variables.

Empirical findings

The empirical analysis begins with the Kaplan–Meier estimator, which provides a non-parametric estimate of the survivor function indicating the probability of an observation to survive past some point in time. Figure 1 shows that the survival probability of a conflict–rebel dyad lasting beyond 2000 days since 1 January 1989 is about 3 percent when rebels have not recruited child soldiers. However, the survival probability and, hence, the chances of continued conflict are substantially higher when rebel groups comprise child soldiers (by about 40 percentage points).

While this offers some initial support for our theoretical expectation, a more systematic analysis is required. Table 1 reports the results of our aggregated empirical analysis, i.e. the models where we use the abstract measures of rebel strength. Table 2 summarizes our findings when taking the more disaggregated perspective. Within Tables 1 and 2 we further distinguish between those models that use the binary child soldier variable and those that rely on the ordinal measure. Finally, the last two models in either Tables 1 or 2 make use of stratified Cox models, i.e. we take the controls *Coup d'etat* and *Ethnic conflict* out of the models, but use them as strata for the estimations. We report non-exponentiated coefficients, where higher values for an explanatory variable signify shorter conflicts. Hence, positive coefficients indicate an increasing hazard (shorter conflicts) and negative coefficients specify a decreasing hazard (longer conflicts).

Tables 1 and 2 show that the two child soldier variables have a negative and significant coefficient, suggesting that the estimated risk of conflict termination decreases when rebel groups have recruited children. Across Models 1–8, when moving from no child soldiering to child soldiering (*Child soldiers dummy*= 1), there is a decrease in the estimated risk of conflict termination as conflicts with child soldiers are about 76 percent less likely to stop. When considering *Child soldiers ordinal*, a rise by one unit reduces

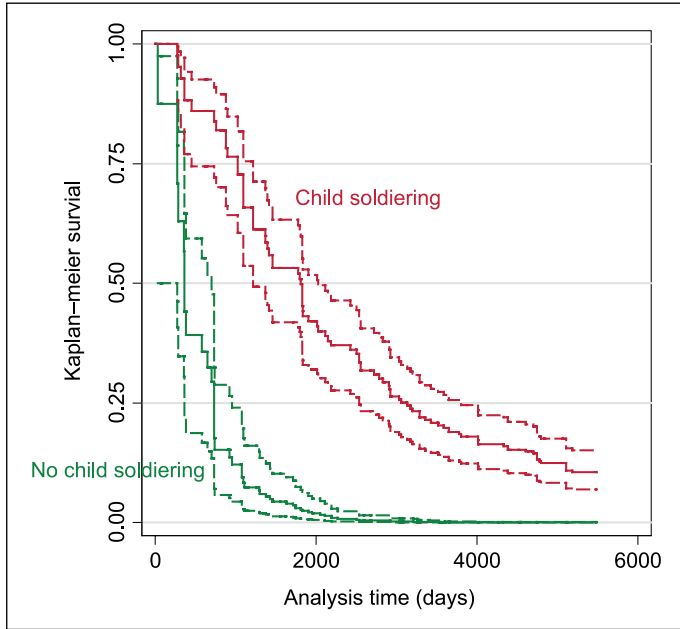


Figure 1. Estimates of Kaplan–Meier survival functions according to *Child soldiers dummy*.

Note: dashed lines constitute 90 percent confidence intervals; green lines pertain to ‘no child soldiers’ (*Child soldiers dummy* = 0), while red lines pertain to ‘child soldiers’ (*Child soldiers dummy* = 1).

the estimated risk of conflict end by about 65 percent. Adding or dropping control variables does not change the substance of these findings.¹⁵

Figure 2 illustrates our key finding in a more nuanced way. We estimated different survival functions that are based on the estimates in Models 5 and 6. This figure, which is based on control variables being set to their mean values, mirrors the results shown in Figure 1 and Tables 1 and 2. The figure shows that child soldiers delay conflict termination. Specifically, the survival probability of a conflict–rebel dyad without child soldiers is about 10 percent (left or right panel) after 2000 dispute days (about 5.5 years). In contrast, the probability that a conflict continues after 5.5 years of fighting is more than 60 percent when considering the aggregated child soldiering value (left panel) and about 50 percent when rebel groups recruited a few child soldiers (right panel); in the cases where child soldiers constitute more than 50 percent of a rebel organization, the probability of conflict continuation is even higher at about 80 percent (right panel).

Coming to our control variables, the results are in line with earlier studies both in terms of substance and significance (see also Cunningham et al., 2009). We focus our discussion on the statistically significant findings due to space limitations. First, rebels that are at least as strong as the government in terms of the ‘offensive strength’ dimension substantially shorten conflicts. The likelihood of a conflict to end is raised by about 120 percent (hazard ratio of 2.20 on average in Table 1). Interestingly, however, Table 2 demonstrates that *High mobilization capacity* largely drives these findings: this variable

Table 1. The determinants of the duration until conflict termination.

	Model 1	Model 2	Model 3	Model 4
Child soldiers dummy	-1.48 (0.24)***		-1.46 (0.25)***	
Child soldiers ordinal		-1.10 (0.19)***		-1.07 (0.19)***
Territorial control	-0.55 (0.27)**	-0.43 (0.28)	-0.49 (0.26)*	-0.39 (0.27)
Legal political wing	0.14 (0.29)	0.28 (0.28)	0.18 (0.28)	0.30 (0.27)
Rebels stronger than government	1.06 (0.33)***	1.07 (0.36)***	1.02 (0.34)***	0.97 (0.37)***
Rebels in parity with government	0.86 (0.27)***	0.87 (0.30)***	0.70 (0.28)**	0.71 (0.30)**
Coup d'etat	2.26 (0.58)***	2.55 (0.56)***		
ELF index	0.15 (0.50)	0.39 (0.45)	0.07 (0.50)	0.36 (0.47)
Ethnic conflict	0.03 (0.26)	0.14 (0.25)		
GDP per capita (ln)	0.12 (0.17)	0.13 (0.16)	0.10 (0.17)	0.11 (0.17)
Democracy	-1.56 (0.41)***	-1.55 (0.38)***	-1.55 (0.40)***	-1.54 (0.38)***
Two or more dyads	-0.23 (0.19)	-0.27 (0.20)	-0.21 (0.19)	-0.29 (0.20)
Population (ln)	-0.01 (0.09)	-0.06 (0.09)	0.01 (0.09)	-0.03 (0.09)
Observations	783	783	783	783
Proportional hazards assumption	13.71	18.15	13.56	18.61
χ^2				
Strata	No	No	Yes	Yes
Pseudo likelihood (ln)	-476.98	-473.28	-378.05	-374.90
Wald χ^2	153.79***	151.16***	88.34***	85.68***

Note: all models are based on Cox proportional hazards models; robust standard errors clustered on conflict in parentheses; Efron method used for ties; Models 3 and 4 use conflict types (coups d'etat and ethnic) as strata. *Significant at 10 percent; **significant at 5 percent; ***significant at 1 percent (two-tailed).

is the only rebel-strength characteristic that consistently has a positive and significant sign across the disaggregated models. In other words, when rebel groups have a high mobilization capacity, the risk of conflict termination increases by about 135 percent (hazard ratio of 2.35 on average in Table 2).

In terms of the conflict-types cluster, *Coup d'etat* has the expected positive sign and is both substantially large and statistically significant throughout the models in Tables 1 and 2. That is, if an armed conflict is about a coup (and that has not yet terminated by a certain time), it has more than 10 (10.02) times the chance to end at the next point in time compared to a non-coup related dispute. Somewhat surprisingly, *Ethnic conflict* does not influence the length of a civil war, which mirrors the findings in Cunningham et al. (2009: 585).

Finally, most of our country-characteristic controls fail to achieve conventional levels of statistical significance. Democracy is the only exception: on average, we obtain a coefficient estimate of -1.51 across our models, suggesting that increasing the polity variable by one unit decreases the estimated risk of conflict end by about 78 percent. Hence, more democratic states actually see longer armed conflicts. In line with Cunningham et al.'s (2009) argument, this result is likely to be driven by democratic states, such as India or Israel, that are involved in particularly long disputes during our study period.

Table 2. Disaggregated analysis for the time until conflict termination.

Variable	Model 5	Model 6	Model 7	Model 8
Child soldiers dummy	-1.38 (0.24)***		-1.37 (0.24)***	
Child soldiers ordinal		-1.02 (0.18)***		-1.02 (0.18)***
Territorial control	-0.49 (0.28)*	-0.45 (0.29)	-0.48 (0.28)*	-0.47 (0.29)
Strong central command	0.15 (0.31)	0.32 (0.31)	0.27 (0.31)	0.49 (0.30)
High mobilization capacity	0.94 (0.36)***	0.72 (0.35)**	0.96 (0.36)***	0.78 (0.36)**
High arms-procurement capacity	1.05 (0.62)*	0.97 (0.64)	1.18 (0.63)*	1.05 (0.65)
High fighting capacity	0.06 (0.46)	-0.16 (0.48)	-0.23 (0.48)	-0.53 (0.52)
Legal political wing	0.04 (0.29)	0.17 (0.28)	0.10 (0.29)	0.23 (0.27)
Coup d'etat	2.28 (0.57)***	2.48 (0.54)***		
ELF index	0.29 (0.51)	0.47 (0.45)	0.19 (0.51)	0.42 (0.45)
Ethnic conflict	0.02 (0.27)	0.14 (0.25)		
GDP per capita (ln)	0.05 (0.18)	0.04 (0.17)	0.03 (0.18)	0.02 (0.17)
Democracy	-1.49 (0.39)***	-1.45 (0.37)***	-1.46 (0.37)***	-1.44 (0.36)***
Two or more dyads	(0.20)	-0.28 (0.21)	(0.20)	(0.20)
Population (ln)	-0.06 (0.10)	-0.11 (0.10)	-0.03 (0.09)	-0.08 (0.09)
Observations	783	783	783	738
Proportional hazards assumption χ^2	6.70	12.33	5.83	11.48
Strata	No	No	Yes	Yes
Pseudo likelihood (ln)	-477.33	-474.89	-376.98	-373.96
Wald χ^2	162.34***	139.74***	120.65***	100.71***

Note: all models are based on Cox proportional hazards models; robust standard errors clustered on conflict in parentheses; Efron method used for ties; Models 7 and 8 use conflict types (coups d'etat and ethnic) as strata. *Significant at 10 percent; **significant at 5 percent; ***significant at 1 percent (two-tailed).

Conclusions

The existing approaches to conflict duration do not consider the influence of child soldiers. With this study, we sought to fill this gap by examining theoretically and empirically how adolescent fighters might increase the length of intrastate-armed conflicts. Theoretically, we argued that child soldiers affect both the willingness and opportunity of rebel groups to continue fighting, which increases the probability that a conflict lasts longer. Our survival analysis highlighted that child soldiers are, in fact, associated with conflict duration. Specifically, the probability of conflict continuation is *ceteris paribus* around 80 percent after 2000 days when many children are recruited, but only 10 percent when rebel groups did not use adolescent soldiers.

We believe that several important avenues for further research exist in light of this finding. First, we treated child soldiers as a homogenous group. Due to the lack of data, we did not account for the gender of recruited children or how they were recruited. Additionally, as discussed above, we are unable to test which of the four mechanisms we developed is the main driver of our results. It remains ambiguous whether children are mostly used as stopgap measures or as leverage in negotiation processes. Future research,

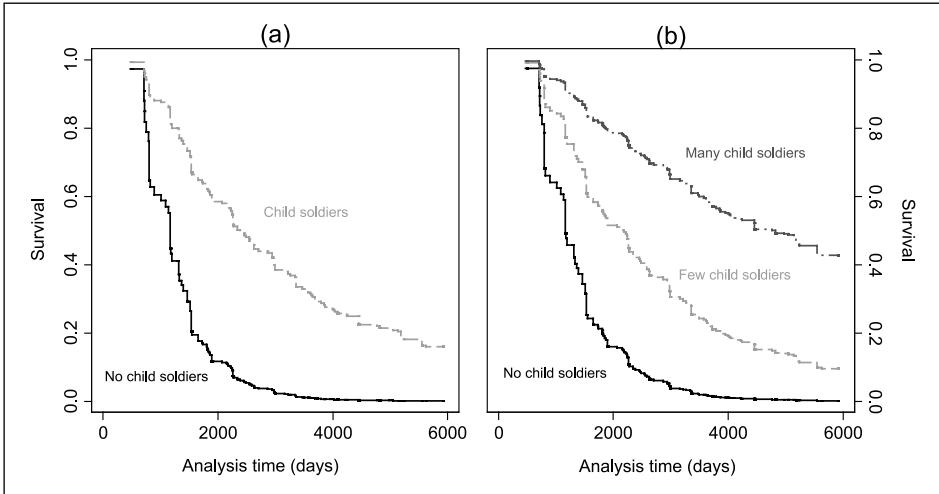


Figure 2. Survival function estimates according to child soldier variables. (a) Model 5; (b) Model 6.

Note: panels show survival functions based on semi-parametric Cox model estimations, while all other variables are held at their mean values.

qualitative cases studies in particular, might then focus on testing each of these direct mechanisms separately to gain more insights on the exact ways children influence conflict length. Finally, it remains to be seen what impact child soldiers have on other, perhaps related, factors such as the outcomes of civil wars or violence against civilians in conflicts. We hope, however, that this research constitutes the starting point for a series of fruitful projects in this area, which will further help in shedding light on the consequences of child soldiering.

With regard to the policy implications of our work, we believe that this research could influence how decision makers and public institutions engage with armed conflicts, their duration and child soldiering in important ways. First, we have shown that there is a frequently overlooked linkage between the recruitment of children and conflict duration. It is then of vital importance for the policy community to establish measures against child recruitment in the first place rather than primarily focusing on how to reintegrate children back into society once a conflict is over. Following recent research on the determinants of child soldiering (Tynes and Early, 2015: 108), policymakers and the international community may have to address more thoroughly those factors that are conducive to child soldiering, but that can nonetheless be directly influenced. For example, the lack of education and future perspectives as well as poverty and starvation are prominent 'supply-side' determinants of child soldiering (e.g. Tynes, 2011: 93). Battling poverty and improving education are therefore key factors in fighting the abuse of children in conflicts. Finally, Tynes and Early (2015) highlight other structural factors, such as democracy, that are likely to decrease the risk of child soldiering. At the same time, however, the link between child soldiers and conflict duration might lead to additional justifications for external interventions: the rationale behind this is that a third-party

intervention could not only address the conflict as such, but also the use of child soldiers (Bakaki and Hinkkainen, 2016; Tynes and Early, 2015).

Second, in line with previous work (e.g. Haer and Böhmelt, 2016b), our work implies that the international community must realize that recruiting and using children in conflict is, although an immoral strategy, conducive to prolonging fighting. While this does not make the aim of abolishing child soldiering easier, activists gain a better understanding of rebels' motives behind child soldiering, which can then be fought more effectively.

Third, despite the importance of preventing the use of child soldiers in the first place, attention should also be given to countering recidivism of former child soldiers during DDR processes (Haer and Böhmelt, 2016a). For instance, these programmes should focus more on the protection of children once they are no longer in an armed group. In addition, policymakers and public institutions must further increase and improve the 'skills' of former child soldiers. Only when these children are capable of performing jobs other than soldiering, they are less likely to enlist (again), which in turn is associated with conflict duration and, hence, material and human costs.

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Notes

1. It is important to note that there is an on-going discussion about the exact number of children involved in armed conflict. The figure of 300,000 is sometimes mentioned, although the evidence for this is somewhat ambiguous. The Human Security Report (2005) provides a detailed overview of this discussion and a critique.
2. In doing so, we also do not focus on the potential use of children by paramilitary organizations. However, when additionally controlling for governments' use of child soldiers using data from Tynes and Early (2015), our core findings remain qualitatively identical.
3. The time period is clearly limited, but we face the same problem as Chiba et al. (2015): while the UCDP/PRIO data we use for our empirical analysis now provides information up to 2014, we opted for 31 December 2003 as the censoring point. The reason for this is that reliable information on many covariates is available only until that point in time. That said, comparing our number of observations with the latest version of the UCDP data reveals that we only miss 220 observations, which is unlikely to bias our estimates.
4. Lasley and Thyne (2015) offer a more comprehensive discussion of these determinants of child soldiering.
5. Besides these strands in the literature, there is an excellent critical literature on child soldiering, vulnerability, agency, or the shortcomings and potentials of the Convention on the Rights of the Child (see, e.g. Lee, 2009).

6. This information is based on the variable we describe in the research design as ‘*strength of a rebel group vis-a-vis the government*’.
7. We control for the first dimension of rebel strength in the empirical analysis.
8. It is important to note that the term child soldier applies to a wide range of children associated with armed groups with enormously varying experiences and roles. A child soldier, according to the official UN definition, can be anything from a sex slave, a cook, a carrier to a combatant (Wessells, 2006).
9. This does, of course, not mean that all rebel groups recruit children, since (costly) investments have to be made to effectively use children in combat and non-combat functions. We return to this selection issue in the research design and the robustness sections.
10. However, recruiting children is not the only way for rebel groups to fill their ranks, as they could also recruit women and the elderly. Comparatively, though, children’s enhanced vulnerability to coercion can make them easier to recruit and retain (Beber and Blattman, 2013; Singer, 2006: 95; Tynes and Early, 2015: 83).
11. We are aware that there is a possibility of reverse causation. That is, it may be precisely prolonged conflict that requires the use of children on the front lines, because of the duration, loss of adults, problems with recruitment, etc. We return to this issue in Appendix 1.
12. The Cox model ensures that the estimation of the partial likelihood function with random right-censoring of observations remains efficient (see Efron, 1977).
13. This, however, only addresses a ‘selection on observables’. We thus estimated bivariate probit models that may account for unobserved factors leading to the non-random selection of child soldiers. We return to this in Appendix 1.
14. Note that our core results remain virtually unchanged when using Wucherpfennig et al.’s (2012) item on ethnic linkage with excluded groups. This item also mirrors what Wucherpfennig et al. (2012) report in terms of substance and significance.
15. See Appendix 1 for additional robustness checks.

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Appendix I

Could rebel child soldiers prolong civil wars?

Table 3 provides descriptive statistics.

Table 3. Descriptive statistics.

Variable	Obs	Mean	SD	Min	Max
Conflict termination	783	0.18	0.39	0.00	1.00
Child soldiers dummy	783	0.85	0.35	0.00	1.00
Child soldiers ordinal	783	1.09	0.61	0.00	2.00
Territorial control	783	0.33	0.47	0.00	1.00
Strong central command	783	0.16	0.37	0.00	1.00
High mobilization capacity	783	0.05	0.21	0.00	1.00
High arms-procurement capacity	783	0.01	0.07	0.00	1.00
High fighting capacity	783	0.02	0.15	0.00	1.00
Legal political wing	783	0.17	0.38	0.00	1.00
Rebels stronger than government	783	0.03	0.17	0.00	1.00
Rebels in parity with government	783	0.08	0.26	0.00	1.00
Coup d'etat	783	0.01	0.10	0.00	1.00
ELF index	783	0.62	0.23	0.08	1.00
Ethnic conflict	783	0.40	0.49	0.00	1.00
GDP per capita (ln)	783	7.76	0.98	5.60	10.47
Democracy	783	0.43	0.50	0.00	1.00
Two or more dyads	783	0.51	0.50	0.00	1.00
Population (ln)	783	10.30	1.86	6.17	13.88

Note: variable *War on core territory* is included in Cunningham et al. (2009), but omitted here, as it is a constant in our sample; duration data are measured in days and based on start date 1 January 1944 (left censored).

Robustness checks

To assess the robustness of our findings, we ran various alternative model specifications. These robustness checks can be replicated with the available data material. Here, we briefly summarize the main robustness checks, but note that all findings based on these alternative specifications further support our results reported in the main text.

First, Vreeland (2008) examines the composition of the *polity2* data we use for regime type thoroughly and shows that the onset of civil war is actually included in this index variable. Given our dependent item on the duration of a conflict, the specifications based on the original *polity2* variable might be unsuitable for accurately capturing regime type without inducing simultaneity bias. As an alternative, we replaced the original democracy measure by a binary variant of Vreeland's (2008) *XPolity* indicator.

Second, are child recruitment and conflict duration actually related, or simply correlated with some unobserved variable that describes the type of group/conflict that is more likely to see child recruitment? We also estimated bivariate probit models that may account for

the non-random selection of child soldiers. Theoretical considerations may suggest that rebel groups recruiting child soldiers are unlikely to be a random sample (e.g. Beber and Blattman, 2013: 68). Children might be more likely to be recruited by, for example, larger groups that have more capabilities to draft, train and socialize them. Additionally, it may be likely that we observe child recruitment especially by rebel groups active in countries in which the government has less capacity to protect its population. Ultimately, we face a selection problem, and regular models could yield biased estimates. We therefore employed recursive bivariate probit models with the specifications outlined in Maddala (1983: 122) in order to account for the potentially endogenous process of child soldiering. In the recursive bivariate probit model, there are two equations (the outcome equation and the selection equation) with correlated disturbances. These two probit equations pertain to two different, yet interrelated processes and, hence, we have to define two distinct dependent variables: one for the outcome equation (i.e. whether a conflict terminates in a specific government–rebel year or not) and one for the selection equation (i.e. whether a rebel group recruits child soldiers (1) or not (0)). These equations are then estimated simultaneously while taking into account the correlation in their error processes.

For specifying the bivariate probit model, we followed those instructions in Haer and Böhmelt (2016b) and focused on demand and supply-side factors of child-soldier recruitment. Note that at least one variable appearing in the selection equation of child recruitment must be excluded from the second equation of duration. This is an exogenous source of variation for child soldiering and is important for the identification of this model. We therefore identified two variables that are likely to affect the recruitment of child soldiers, but not – at least not directly – the duration of conflicts, and include them consistently in the selection stage of the bivariate probit models. Similar to Gartner (2011), we include the dispute types (ethnic conflicts and coups) only directly in the selection equation. Certain types of disputes are more likely to see child soldiering, but these conflict characteristics have a less direct influence on duration.

The core results of the bivariate probit regressions that take into account the likely non-random assignment of children to rebel groups (also based on unobservable factors) do not differ from the tables presented in the main text. The child-soldiers variable has a negative coefficient, thus delaying the termination of a conflict (estimate of -1.95 for a replication of Model 1 in the main text; estimate of -2.01 for a replication of Model 5 in the main text). Further note that our estimate for ρ ($\text{prob} > \chi^2 = 0.05$ for a replication of Model 1 in the main text; $\text{prob} > \chi^2 = 0.03$ for a replication of Model 5 in the main text) is positively signed in all estimations. This implies that unobserved features that increase the likelihood of selection (i.e. the recruitment of child soldiers into rebel groups) actually increase the probability of conflict termination.

Finally, there may be a problem with reverse causation as it could be the case that longer conflicts require the recruitment of new soldiers and the exploitation of new recruitment pools. In other words, the duration of a conflict can have a major impact on the child-soldiering practices of the rebels. The longer the duration of a conflict, the higher the chances that children have been recruited as fighters (Lasley and Thyne, 2014; Tynes and Early, 2015). Because of this potential endogeneity of the child-soldier measure, the coefficient estimates in the regular models might be biased. However, estimations using three-stage least squares of pairs of equations (3SLS), one for civil war termination (and,

Table 4. 3SLS regression model, 1989–2003.

Variable	Child soldier equation	Conflict termination equation
Child soldiers dummy		-0.33 (0.13)**
Conflict termination	-0.86 (0.26)***	
Time elapsed since last conflict	-0.00 (0.00)	0.00 (0.00)
Territorial control		-0.03 (0.02)
Rebels stronger than government		0.23 (0.11)**
Rebels in parity with government		0.14 (0.07)*
Legal political wing	-0.00 (0.03)	
Coup d'etat		0.70 (0.18)***
ELF index	-0.04 (0.07)	
Ethnic conflict	-0.06 (0.03)*	
GDP per capita (ln)	-0.08 (0.02)***	
Democracy		-0.15 (0.03)***
Two or more dyads	0.02 (0.03)	
Population (ln)	0.03 (0.01)**	

Note: based on three-stage least squares regression model. Constants included in both equations, but omitted from presentation. *significant at 10 percent; **significant at 5 percent; ***significant at 1 percent (two-tailed).

thus, duration) and another for child soldiering, give very similar results to those shown in the main text (Table 4). To estimate new regressions using 3SLS for determining if our models might suffer from simultaneity, i.e. reverse causality, we needed to specify an equation for either of the two variables – conflict termination (and, thus, duration) and child soldiers. We explored possible specifications by running multiple models. In 3SLS, instruments for endogenous variables are generated by regressing each such variable on all exogenous variables in the system. Here, the endogenous variables are conflict end/termination and the binary variable for child soldiers. The following regression is then a re-estimate of our core models in the article using 3SLS. In essence, we decided to move all statistically insignificant variables from the original duration equation to the child-soldiers equation. While the results are very similar to our manuscript, particularly with regards to our core finding that child soldiering prolongs civil wars, it is in particular striking that there is evidence for reverse causation. This supports the view that causality flows from child soldiering to civil war duration – and also the other way round.

Coding rules in Haer and Böhmelt (2016b)

On the basis of different sources (e.g. Child Soldiers International, Human Rights Watch, Amnesty International, World Bank, BBC, CNN, Reuters, UNICEF, AFP and various academic articles and books), Haer and Böhmelt (2016b) coded whether a particular rebel group did not use child soldiers at all (coded as 0), used just a few child soldiers (less than 50 percent of the group consisted of children; coded as 1), or whether the rebel group used many child soldiers (more than 50 percent of the group consisted of children; coded as 2). For this coding process, Haer and Böhmelt (2016b) pursued a rather conservative approach:

- In the cases where no reports were found that confirmed the use of child soldiers by a particular group, this group was coded as having no child soldiers. For example, in the case of the *Comité de Sursaut National pour la Paix et la Démocratie* in Chad, no reports were found that linked this particular group to child soldier usage. Consequently, this particular group received the value of 0.
- In the cases where reports were found that indicate that children were used in the armed group, without giving an exact number or percentage, this armed group was coded as having just a few children. For example, Human Rights Watch (2007: 25) stated about the *Front Uni pour le Changement* (FUC): ‘Children in the FUC play a direct role in combat operations’. Consequently, this particular group active in Chad received the value of 1.
- In the cases where conflicting reports were found, the mode of these reports was taken. For example, five reports are given on the use of child soldiers by the West Nile Bank Front (WNBFB) in Uganda. Four of these reports indicated that child soldiers were used by the group, without mentioning a specific number. Only one report indicated that this group used more than 2000 children. Consequently, the WNBFB received the value of 1 in our coding. In the cases where there was no mode, it was decided to record the lowest number of child soldiers in order to avoid overestimation.

Table 5 lists all coded rebel groups per country and their level of child soldier usage (Cunningham et al., 2009). Note that some armed groups receive two values for their child soldier usage. This is because child soldier usage may have changed over a conflict-dyad.

In light of this, although Haer and Böhmelt (2016b) took great care to ensure the accuracy of the collected data, it is important to devote some attention to sources of potential bias. For example, advocacy groups might have incentives to exaggerate the proportion of child soldiers to get attention for their mission. In addition, rebel groups could downplay their recruitment of child soldiers in order to avoid punishment by the international community. Furthermore, it is likely that advocacy groups and news reports only report child soldier usage by rebel groups that are well known. Consequently, finding no reports on the child usage of a particular armed group may not necessarily mean that this armed group does not use child soldiers.

When comparing our data with the two existing datasets (Beber and Blattman, 2013; Tynes, 2011), we see that Haer and Böhmelt’s (2016b) data set does not identify any group having child soldiers that was not already identified as such by the latter sources. The only major difference that we found is that Haer and Böhmelt’s (2016b) data classify three armed groups (the Congolese Alliance of Democratic Forces for the Liberation of Congo–Zaire (AFDL), the Congolese Rally for Democracy (RCD) and the Somali Al-Shabaab) as having used many child soldiers (coded as 2 on our variable), while Beber and Blattman (2013) coded the child usage of these groups as less than 50 percent. Given the sources for our coding of these groups, nevertheless, we believe that Haer and Böhmelt (2016b) have more accurate information.

Table 5. Coding of child soldier usage by rebel group.

Country	Armed group	Child soldier usage
Afghanistan	Hezb-i-Islami	1
	Hezb-i-Wahdat	1
	Hizb-I Islami-yi Afghanistan	1
	Jamiat-i-Islami	1
	Junbish-i Milli-yi Islami	1
	Military Faction	Missing
	Taliban	2
	UIFSA	1
Algeria	AQIM	0
	Exile and Redemption	0
	FIS	1
	GIA	1
Angola	FLEC	2
	FLEC-FLAC	2
	UNITA	2
Azerbaijan	Husseinov Military Faction	0
	OPON forces	0
	Republic of Nagorno-Karabakh	0–1
Bangladesh	JSS/SB/Shanti Bahini	1
Bosnia and Herzegovina	Autonomous Province of Western Bosnia	0
	Croatian irregulars	0
	Croatian Republic of Bosnia and Herzegovina	1
	Serbian irregulars	1
	Serbian Republic of Bosnia and Herzegovina	1
Burundi	CNDD	1
	CNDD–FDD	2
	Frolina	1
	Palipehutu	1
	Palipehutu–FNL	2
Cambodia	FUNCINPEC	1
	FUNCINPEC/ANS	1
	Khmer Rouge/PDK	1
	KPNLF	1
Central African Republic	CPJP	1
	Forces of André Kolingba	0
	Forces of Francois Bozize	1
	UFDR	2
Chad	AN	0
	CNR	0
	CSNPD	0

(Continued)

Table 5. (Continued)

Country	Armed group	Child soldier usage
	FARF	0
	FNT	1
	Forces of Maldoum Bada Abbas	0
	FUCD	1
	Islamic Legion	0
	MDD [-FANT]	2
	MDJT	1
	MPS	0
	PFNR	1
	RAFD	1
	UFDD	1
	UFR	1
Colombia	ELN	1
	EPL	1
	FARC	1
Comoros	MPA	1
Congo, Democratic Republic of the	AFDL	2
	BDK	1
	CNDP	1
	MLC	1
	RCD	2
Congo, Republic of the	Cocoyes	1
	FDU	0
	Ninjas	1
	Ntsiloulous	1
Cote D'Ivoire	FN	1
	MJP	1
	MPCI	2
	MPIGO	1
Croatia	Serbian irregulars	1
	Serbian Republic of Krajina	0
Djibouti	FRUD	2
	FRUD – AD	2
Egypt	al-Gamaa al-Islamiyya	1
El Salvador	FMLN	1
Eritrea	EIJM	0
Ethiopia	al-Itahad al-Islami	1
	ARDUF	0
	EPLF	1
	EPRDF	0
	ONLF	1
	OLF	1

Table 5. (Continued)

Country	Armed group	Child soldier usage
Georgia	Anti-government alliance	0
	Republic of Abkhazia	1
	Republic of South Ossetia	0
	Zviadists	0
Guatemala	URNG	1
Guinea	RFDG	0
Guinea-Bissau	Military Junta for the Consolidation of Democracy, Peace and Justice	1
Haiti	FLRN	0
	Forces of Raoul Cédras	0
	OP Lavalas (Chimères)	0
India	ABSU	0
	ATTF	2
	BDSF/NDFB	2
	CPI-Maoist	1
	DHD – BW	1
	Kashmir Insurgents	1
	KCP	1
	KNF	1
	MCC	1
	Naxalites/PWG	1
	NDFB – RD	2
	NLFT	2
	NSCN	2
	NSCN – K	1
	PLA	1
	PREPAK	1
	PULF	1
	Sikh insurgents	0
	UFLA	2
	UNLF	1
Indonesia	Fretilin	1
	GAM	1
Iran	Jondullah	0
	KDPI	1
	Mujahideen e Khalq	1
Iraq	PJAK	1
	Al-Mahdi Army	2
	Ansar al-Islam	0
	ISI/Jama'at Al-Tawhid wa Al-Jihad	2
	KDP/DPK	1
PUK	1	

(Continued)

Table 5. (Continued)

Country	Armed group	Child soldier usage	
Israel	RJF/Al-Jaysh al-Islami fi Iraq	0	
	SCIRI	0	
	AMB	1	
	Fatah	0	
	Hamas	0–1	
	Hezbollah	0	
	PFLP	1	
	PIJ	1	
	PLO/Fatah	1	
	PNA	1	
	Popular Resistance Committees	1	
Laos	LRM	0	
Lebanon	Lebanese Army (Aoun)	0	
Lesotho	Military Faction	0	
Liberia	INPFL	1	
	LURD	2	
	MODEL	2	
	NPFL	2	
Macedonia	National Liberation Army (UCK)	1	
Mali	ATNMC	0	
	FIAA	0	
	MPA	0	
Mauretania	AQIM	1	
Mexico	EPR	1	
	EZLN	1	
Moldova	Dniestr Republic	0	
Mozambique	Renamo	2	
Myanmar	ABSDF	1	
	Arakan Rohingya Islamic Front	0	
	BMA	0	
	DKBA 5	2	
	God's army	1	
	KIO	1	
	KNPP	1	
	KNU	1	
	MNDAA	1	
	MTA	1	
	NMSP	1	
	Rohingya Solidarity Organisation	0	
	SSA-S	1	
	UWSA	1	
	Nepal	CPN-M/UPF	2
	Nicaragua	FDN/Contras	0

Table 5. (Continued)

Country	Armed group	Child soldier usage
Niger	CRA	0
	FDR	0
	FLAA	0
	MINJ	1
	UFRA	0
Nigeria	Ahlul Sunnah Jamaa	0
	Boko Haram	0
	NDPVF	1
Pakistan	Baluch Ittehad	1
	BLA	1
	BRA	1
	MQM	1
	TNSM	1
	TTP	1
Papua New Guinea	BRA	1
Peru	MRTA	1
	Sendero Luminoso	1–2
Philippines	Abu Sayyaf	1
	CPP	1
	Forces of Honasan, Abenina and Zumel	0
	MILF	1
	MNLF	1
	MNLF – HM	0
	MNLF – NM	0
Russia	Forces of the Caucasus Emirate	0
	Parliamentary forces	0
	Republic of Chechnya	2
	Wahhabi movement of the Buinaksk district	1
Rwanda	FDLR	1
	FPR	1
	Opposition alliance	1
Senegal	MFDC	0
Sierra Leone	AFRC	2
	Kamajors	1
	RUF	2
	WSB	1
Somalia	Al-Shabaab	2
	ARS/UIC	1
	Harakat Ras Kamboni	1
	Hizbul-Islam	1
	SNM	2

(Continued)

Table 5. (Continued)

Country	Armed group	Child soldier usage
	SPM	1
	SRRC	1
	USC	1
Soviet Union	ANM	0
	Azerbaijani Popular Front	0
Spain	ETA	1
Sri Lanka	JVP	1
	LTTE	2
Sudan	Forces of George Athor	2
	JEM	1
	NRF	0
	SLM/A	1
	SLM/A – MM	1
	SLM/A–Unity	1
	SPLM	1
Tajikistan	IMU	1
	Movement for Peace in Tajikistan	0
	UTO	1
Thailand	Patani insurgents	2
Trinidad and Tobago	Jamaat al-Muslimeen	0
Turkey	Devrimci Sol	0
	MKP	0
	PKK/Kadek	1
Uganda	ADF	1–2
	LRA	2
	UNRF II	1
	UPA	1
	WNBF	1
United Kingdom	PIRA/IRA	0
	Real IRA	1
United States of America	al-Qaida [The Base]	1
Uzbekistan	JIG	1
	MIU	1
Venezuela	Forces of Hugo Chávez	0
Yemen	AQAP	1
	Democratic Republic of Yemen	1
Yugoslavia	Croatian irregulars	0
	Republic of Croatia	0
	Republic of Slovenia	0
	UCK	1