

# Explaining Recidivism of Ex-combatants in Colombia

Oliver Kaplan<sup>1</sup> and Enzo Nussio<sup>2</sup>

Journal of Conflict Resolution

1-30

© The Author(s) 2016

Reprints and permission:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/0022002716644326

jcr.sagepub.com



## Abstract

What determines the recidivism of ex-combatants from armed conflicts? In post-conflict settings around the world, there has been growing interest in reintegration programs to prevent ex-combatants from returning to illegal activities or to armed groups, yet little is known about who decides to “go bad.” We evaluate explanations for recidivism related to combatant experiences and common criminal motives by combining data from a representative survey of ex-combatants of various armed groups in Colombia with police records of observed behaviors that indicate which among the respondents returned to belligerent or illegal activities. Consistent with a theory of recidivism being shaped by driving and restraining factors, the results suggest that factors such as antisocial personality traits, weak family ties, lack of educational attainment, and the presence of criminal groups are most highly correlated with various kinds of recidivism and hold implications for programs and policies to successfully reintegrate ex-combatants into society.

## Keywords

recidivism, reintegration, DDR, Colombia, civil war, ex-combatants

---

<sup>1</sup>Josef Korbel School of International Studies, University of Denver, Denver, CO, USA

<sup>2</sup>Center for Security Studies, ETH Zurich, Zurich, Switzerland

## Corresponding Author:

Oliver Kaplan, Josef Korbel School of International Studies, University of Denver, Ben M. Cherrington Hall, 2201 South Gaylord Street, Denver, CO 80208, USA.

Email: oliver.kaplan@du.edu

In 2005, the government didn't pay me in January, February, June or July, so I went to pick coca.

Interview with ex-paramilitary ex-combatant, Tierralta, Colombia, April 2009

Before, I didn't have anyone else to think about. I didn't have any obligations. Now I have a daughter and she gives me many reasons not to go back to crime.

Interview with ex-paramilitary ex-combatant, Barrancabermeja, Colombia, March 2009

What determines the recidivism of ex-combatants from armed conflicts? In post-conflict settings around the world, there has been growing interest in reintegration programs to prevent ex-combatants from returning to illegal activities or to armed groups. Although the international community has accompanied over sixty such processes since the late 1980s (Muggah 2009), with \$630 million USD spent on programs worldwide for around 1 million ex-combatants in 2007 alone, there is little systematic evidence about who decides to "go bad." While some ex-combatants rejoin armed groups or become common delinquents after demobilizing, others are able to make fresh starts and leave their violent lifestyles behind. Why?

Recidivism is puzzling because there are multiple motivations to return to violent and illicit behavior, but there is little consensus about which pathways matter most since they have not yet been sorted through empirically.<sup>1</sup> There is little consensus, for instance, about whether inherent individual characteristics override social factors (or vice versa) and no baseline expectation about whether all, none, or some of the ex-combatants exiting war will become recidivists. We aim to make the academic contributions of specifying recidivism as a key reintegration failure, developing a comprehensive theory for recidivism, and empirically parsing recidivism explanations with a novel measurement approach. We identify the factors unique to the recidivism of ex-combatants, with existing explanations from criminology serving as a helpful though incomplete guide.

Studies on reintegration have identified the problems of violent spoilers (Stedman 1997) and the security dilemma (Walter 1997) that combatants face when they disarm and reenter society as key hurdles to consolidating peace. Around the world, ex-combatants of nonstate armed groups have turned to a variety of illegal and belligerent activities, including organized crime in Bosnia (Moratti and Sabic-El-Rayess 2009), petty crime in South Africa (Mashike 2007), vigilantism in the Philippines (International Crisis Group 2013), and renewed conflict and violence in the Republic of Congo (Themnér 2011) and Afghanistan (Zyck 2009). Studies focusing on illegal activities of ex-combatants by Collier (1994), Bøas and Hatløy (2008), and Hill et al. (2008) identify poor access to land, security threats, and poverty as motivations of ex-combatants to return to illegal activities. Yet, prior studies of recidivism do not use behavioral data to measure outcomes. Rather, they rely on aggregate-level data or perceptual assessments of potential risk factors for recidivism and are therefore plagued by attendant measurement validity concerns.

This study overcomes previous measurement and inference problems by using a behavioral indicator of recidivism among ex-combatants in Colombia to analyze why and when ex-combatants commit crimes. We evaluate individual-level, community-level, and broader security environment and reintegration program predictors of recidivism by combining data from a representative survey of ex-combatants of various armed groups from Colombia with police records that indicate which among the respondents later returned to belligerent or illegal activities. We also conducted interviews with ninety-eight ex-combatants during the period of study, which help illustrate some of the motivations for recidivism. This approach can inform how political scientists, sociologists, criminologists, and other conflict scholars study the trajectories of ex-combatants and similar populations, such as former gang members and captured terrorists.

With our behavioral data, we are able to use survival models to estimate ex-combatant recidivism, as have frequently been used in modeling traditional kinds of crime. The results of the analysis support a number of hypotheses for recidivism in Colombia derived from criminology as well as conflict studies. Ex-combatants are more likely to return to illegal activities if they are former paramilitaries (approximately 50 percent more likely than former guerrilla fighters), had strong personal motives for initially joining an armed group (53 percent more likely) or spent more time in such groups (4 percent more likely for each year in such groups), do not have children (40 percent more likely), are in the vicinity of reemergent criminal bands (158 percent more likely), and did not complete high school during their time in the reintegration program (35 percent more likely). These findings suggest their decision-making is shaped by a mix of driving and restraining forces and have implications for the success of programs and policies to reintegrate ex-combatants into society. They hold special relevance as the Colombian government and Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia; FARC) work to negotiate a peace agreement.

Colombia provides a good testing ground for assessing the causes of ex-combatant recidivism. In the country's complex armed conflict, Government of Colombia forces and paramilitary groups (unified under the Autodefensas Unidas de Colombia [United Self-Defense Forces of Colombia; AUC] umbrella group in 1997) have fought various rebel groups for decades, including the FARC and Ejército de Liberación Nacional (National Liberation Army; ELN). While Colombian citizens have constantly been recruited into and come out of these groups through the years, beginning in 2002 an increasing number of rebels chose to individually demobilize due to a government policy of incentives for guerrilla deserters. Paramilitary groups demobilized collectively between 2003 and 2006 after signing peace accords with the government. In 2012, there were approximately 55,000 ex-combatants in Colombia (34,000 former AUC members and the remainder from different guerrilla groups). Since 2006, the government's High Advisory for Reintegration (ACR) program has provided support to these fighters as they reintegrate into society. Even with this program, recidivism of ex-combatants is a serious concern, as

an estimated 20 percent of them (11,000) committed crimes between 2003 and 2012, according to official numbers provided by the ACR.<sup>2</sup> Consistent with the drift in Colombia toward organized criminal violence, many of these crimes were not related to political violence, though some have had political overtones. The Colombian context is therefore relevant for other countries that are dealing with the reintegration of ex-combatants.

In what follows, we first discuss the existing literature on disarmament, demobilization, and reintegration (DDR) programs and recidivism. We then formulate a theory and hypotheses about the predictors of ex-combatant recidivism. Next, we provide a brief history of conflict, demobilization, and reintegration experiences in Colombia. We then describe the research design and data and subsequently present the empirical results of our statistical analysis, robustness checks, and qualitative evidence from interviews with ex-combatants. An additional analysis of the potential effects of DDR program elements on recidivism highlights the importance of the basic education program. We conclude with a summary of our findings and implications for DDR programs and addressing ex-combatant recidivism in Colombia and beyond.

## **The Literature on Ex-combatant Reintegration and Recidivism**

Reintegration is the process through which ex-combatants adapt to society after exiting conflict. The United Nations (2006) has characterized reintegration as a primarily economic and social process, where DDR programs help ex-combatants acquire civilian status as well as gain education, sustainable employment, income, and social ties (Cartagena Contribution to Disarmament, Demobilization and Reintegration 2009). According to McEvoy and Shirlow (2009), reintegration can benefit from the very leadership skills and political agency of the ex-combatants. By contrast, recidivism can be thought of as repeat offending and is the clearest and most severe form of individual reintegration failure (and may drive broader collective remobilization). Although not all who fail to reintegrate are recidivists, all recidivists represent reintegration failures.

Early DDR efforts sought to merely break armed groups' command and control structures but, over time, have come to address rearming through promoting positive peace and long-term development (Muggah and O'Donnell 2015). Indeed, reintegration programs designed to affect the calculus of ex-combatants and keep them from becoming rearmed spoilers and criminals include approaches as diverse as education and occupational training, psychosocial counseling, police monitoring, and financial subsidies. Programs have also broadened beyond members of nonstate armed groups in postconflict to engage with armed actors during conflicts or in nontraditional criminal settings and involve ex-combatants' families and local communities (Kaplan and Nussio 2015).

Several studies have analyzed the causal effects of DDR programs. Humphreys and Weinstein (2007) find no effect of ex-combatant participation in reintegration

programs in Sierra Leone, while Gilligan et al.'s (2013) quasi-experimental approach finds certain elements of the DDR program in Burundi are associated with successful reintegration. However, neither study examines illegal behavior as an outcome variable.

An additional set of studies has specifically analyzed factors associated with conflict recurrence and ex-combatants' involvement in crime. Walter's (2004) study of cross-country aggregate-level data finds that poor living conditions and limited access to political participation are the most important explanatory factors for recurring civil war. An early study by Collier (1994) on DDR in Uganda using district-level data finds that criminality decreased shortly after demobilization except in areas where ex-combatants had no access to land.

More recently, scholars have produced individual-level data with surveys of ex-combatants. Hill et al. (2008) analyze a survey of ex-combatants in Liberia that asked under what conditions they *would* fight again (i.e., intentions rather than actual behavior) and identify poverty, unemployment (especially for those previously employed), and acceptance in their families and communities as the most important factors. Bøas and Hatløy (2008) also surveyed Liberian ex-combatants and instead find that security threats shape both their initial reasons for joining armed groups as well as their choices after demobilization. Further, Blattman and Annan (2011) experimentally demonstrate using survey indicators that an agricultural training program in Liberia reduced illicit livelihoods among ex-combatants. Here, even within the same country, varying methods and the use of survey indicators of recidivism (rather than behavioral measures) yield contrasting views about the most important explanatory factors for recidivism.

Additional studies on reengagement in illegal activities are based on qualitative evidence. Mashike's (2007) elite interviews highlight lack of economic opportunities, political grievances, and military skills as reasons for former South African insurgents to engage in crime. Jennings's (2007) analysis of interviews with Liberian ex-combatants shows dissatisfaction with reintegration programming as a cause of recidivism. Zyck's (2009) study of accounts from demobilized United Front fighters in Afghanistan shows broken ties with their former military units and subsequent "social disorientation" was associated with remobilization to Taliban groups. By contrast, Themnér (2011) finds in Sierra Leone and the Republic of Congo that remobilization is most likely when former mid-ranking commanders reestablish relationships with former associates.

These existing studies suggest various potential explanations for recidivism but have several shortcomings. Some suffer from construct validity problems (i.e., survey questions about intentions or prior motivations for joining), the anecdotal accounts have limits for parsing explanations or inferring about larger populations, and aggregate-level studies are poor at diagnosing individual motivations. Our study builds on the existing studies of ex-combatant recidivism but overcomes some of their limitations with a more comprehensive theory and an improved empirical approach.

## A Theory of Ex-combatant Recidivism

We theorize that ex-combatants' participation in illegal or belligerent activities is the product of both driving and restraining forces. Demobilized fighters find incentives and opportunities for recidivism in their economic and security contexts and they may also have individual preferences (psychological motivations) for antisocial behavior. These factors are similar to more commonly examined processes of initial recruitment into nonstate armed groups. However, we argue that ex-combatants' decisions to reengage in illegal activity are not only determined by context-based incentives and opportunities or inherent individual preferences but are also tempered by ex-combatants' immediate social surroundings, as held by many criminological theories about social control. Such theories predict a reduced proclivity toward crime in the presence of functioning social institutions and relationships.

These insights from criminology and conflict studies point to economic strain, security dilemmas, and criminal opportunities as key contextual determinants; enduring preferences for violent lifestyles as an individual determinant; and family, policing, and reintegration programming as potential mechanisms of social control. Together, these driving and restraining factors should shape an individual's decision to move toward or away from recidivism.

### Driving Forces

We distinguish three context-related factors that might drive ex-combatants' decisions to participate in crime: economic conditions, security context, and criminal opportunities. Since some first-time recruits of nonstate armed groups are motivated by relative economic deprivation (Gurr 1970), we expect such motivations may recur for ex-combatants. Relative deprivation resembles the more general strain theory from criminology (Agnew 2006), which posits that if socially desirable material goods and nonmaterial values are unattainable due to a lack of financial opportunities, it can lead to frustration and anger and fuel illegal behavior. We therefore hypothesize that *as an individual's relative economic prospects worsen, participation in illegal activities will increase.*

Second, risks to personal security may carry forward from prior experiences as a combatant and generate security dilemmas. Liberian ex-combatants frequently cited security threats as initial reasons for joining an armed group (thought to also shape postdemobilization trajectories), often to protect themselves or their families (Boas and Hatløy 2008). Indeed, being part of a group during a civil conflict can confer more protection than being outside of a group (Kalyvas and Kocher 2007). After demobilization, ex-combatants may feel threatened due to old rivalries, comrades who remobilized, feelings of paranoia related to earlier war experiences, or persistent conflict conditions (Nussio 2011a). One solution is to once again join a violent organization that provides protection (though this may contribute to a larger security dilemma). This suggests the hypothesis that *ex-combatants in conditions of*

*insecurity are pushed toward joining violent organizations and participating in illegal activities.*

Third, ex-combatants may be pulled toward crime by attractive opportunities. Spoilers and violence entrepreneurs can provide lucrative employment opportunities to former combatants (Stedman 1997; Themnér 2011), and ex-combatant networks can serve as one particular pathway to gain access to them (Zukerman Daly 2011). Ex-combatants with specific criminal skill sets (Mashike 2007) may thus be more prone to engage in crime where there are opportunities to employ those skills and socialize with delinquent peers—a claim that is no surprise to criminologists (Agnew and White 1992). We hypothesize that *ex-combatants will be pulled toward illegal opportunities where there is demand for their specific skills and networks of former comrades.*

Beyond contextual factors, ex-combatants' decisions to participate in crime may be driven by inherent and largely stable individual preferences. According to the international DDR standards, the main goal of DDR processes is to “contribute to security and stability in post-conflict situations” (United Nations 2006, 24). Implicit in this statement is the premise that demobilized armed groups and ex-combatants pose a security threat to postconflict societies due to their proclivities for violence.<sup>3</sup> While this generalizing assumption may overstate their potential to do damage, certain inherent personal preferences may be associated with violence-related life-course trajectories, as described in criminological literature (Sampson and Laub 1997). For example, if individuals joined an armed group because they found pleasure in the combatant way of life, felt empowered carrying a weapon, or enhanced their reputation through membership in an armed group, their attraction to a violent lifestyle might endure even after demobilization (Nussio 2012; Tezcür 2010; Villegas 2009). Relatedly, individuals who experience loss of prestige or status after demobilization might engage in illegal activities to restore their self-images (which may be more prevalent among men if identifying as a fighter is linked to notions of masculinity; Theidon 2009). We therefore hypothesize that *ex-combatants with past preferences for a violent lifestyle are more prone to participate in illegal activities after demobilization.*

### **Restraining Forces**

The driving factors may lure ex-combatants back to crime, but other factors may inhibit ex-combatant recidivism. A theory of recidivism is thus incomplete without also considering these restraining forces. These arguments can be grouped under the broader label of social control (Hirschi 2001), where a person's proclivity for committing crime is higher when there are fewer functioning social institutions to deter criminal acts (Akers 2009). For the case of gang membership, Moloney et al. (2009) argue that family ties can function as especially strong restraints. According to Hill et al. (2008), acceptance by one's family and community is also important for ex-combatants and may counteract the possible stigmatization and discrimination they

may face (McMullin 2013) that can distance them from society. This suggests the hypothesis that *as ex-combatants' family situations improve, their participation in illegal activities will decrease.*

A second social institution that restrains ex-combatants' moves to crime is the reintegration program. Jennings's (2007) interviews with Liberian ex-combatants show dissatisfaction with the reintegration program as a cause of recidivism, while Blattman and Annan (2011) find agricultural training reduced the involvement of ex-combatants in illicit economic activities. Even the United Nations (2006, chapter 4.30, 4) acknowledges that reintegration is a complex task, "Frequently, disarmament and demobilization are carried out very effectively, but then reintegration fails, jeopardizing the DDR program and the wider security situation." Therefore, *the more ex-combatants benefit from reintegration programs, the more their participation in illegal activities will decrease.*

## The Reintegration of Ex-combatants in Colombia

The testing ground for our hypotheses is the process of DDR programs taking place in Colombia. Many former members from both right-wing paramilitary groups and left-wing guerrillas have demobilized in recent years, with 52,419 individuals certified as demobilized between August 2002 and January 2010 (ACR). The majority of demobilized fighters belonged to the right-wing paramilitary group AUC, the main responsible group for war atrocities, especially during its expansion between 1997 and 2002 (Centro Nacional de Memoria Histórica 2013). After negotiations with the government of Álvaro Uribe, 31,671 members of the AUC collectively demobilized bloc-by-bloc between 2003 and 2006 during a process that was criticized for its lack of transparency, inflated numbers of demobilized fighters, and continued violence by spoiler factions (Nussio 2011b).

Members of guerrilla groups have demobilized in a different way. Since the main guerrilla groups (FARC and ELN) are still active, the guerrilla fighters who have demobilized have often been lured away from their groups with the promise of reintegration benefits or been captured. A policy to promote the individual demobilization of combatants has been in place since 1984 and, since 2002, has become an increasingly important element of the government's counterinsurgency strategy. Between 2002 and January 2010, 20,748 total combatants decided to individually demobilize or desert their groups.<sup>4</sup>

Since 2006, the ACR<sup>5</sup> has administered Colombian reintegration policies and programs. Ex-combatants responsible for crimes against humanity, mostly high- and mid-ranking commanders of the AUC, were tried under the Justice and Peace Law and sentenced to reduced prison penalties of up to eight years. Most rank-and-file ex-combatants, accounting for the bulk of the demobilized population in Colombia, were pardoned for their involvement in nonstate armed organizations and were eligible to enter the ACR program. The ACR has assisted ex-combatants with education, vocational training, grants for microbusiness projects, psychosocial

support, health care, and a monthly stipend conditioned on participation in program activities. Symbolic initiatives, such as sports events and restoration of public spaces by demobilized individuals, have been used to publicize reintegration in receptor communities.

Even with the support from the ACR, the daily life of an ex-combatant in Colombia has many challenges. With low levels of education and few skills or social contacts, many of these individuals are prone to struggle with reintegration (Conpes 3554 2008). They also face risks of violence, as 3,003 ex-combatants were killed between 2003 and 2012, according to the police. And, as ex-combatants are largely unmonitored and free to go about their lives, the possibilities of committing a crime or returning to an armed group are left open.

## Explaining Recidivism

### *The Data and Sample*

We take advantage of a survey of ex-combatants conducted in 2008 along with data from police records to conduct an observational survival analysis of recidivism. This research design has been applied to studying crime in developed countries but not to ex-combatants in developing countries, where criminal justice systems and data collection capacity are generally weaker. Indeed, applying this design to ex-combatants in conflict countries faces numerous challenges: records are poor, police forces are often weak, there are usually neither baseline measurements nor follow-up waves, and finally there must be a way to identify captured criminals as former combatants and link their records to previously collected data. These constraints imply certain limits to the external validity and broader applicability of this research design and the Colombian context since, under the Colombian DDR process, individuals are free to find their way into trouble and there is at least a modestly functioning police force to capture some of them and record events.

The main data we use to evaluate our hypotheses on social reintegration come from a survey of former combatants in Colombia from 2008. This survey was conducted by the Fundación Ideas para la Paz (FIP), a Colombian foundation with a long history of working on conflict issues, in collaboration with the ACR and was funded by the Canadian government.<sup>6</sup>

Various regional teams directed by a central national coordinator executed the survey between February 5, 2008, and May 31, 2008, resulting in a sample of 1,485 ex-combatants.<sup>7</sup> As is the case with most DDR processes, it is a challenge to construct an adequate sampling frame since many ex-combatants choose to live in anonymity after leaving their armed groups, may prefer not to participate in DDR activities, or enter newly created armed groups and criminal organizations (Nussio 2011a). Given the difficulties with locating and enrolling former combatants, different procedures were applied to adequately sample various subpopulations of interest.

In the first procedure, a random sample of 944 ex-combatants (64 percent of the sample) from the ACR's database were directly contacted and surveyed through ACR psychosocial tutors from regional reintegration centers.<sup>8</sup> FIP used a second procedure to increase the subsamples among still undersampled ex-combatants who participated in joint or individual microenterprise projects or were underage. One hundred and thirty-two ex-combatants were selected for being participants in the joint microenterprise projects, 197 were selected for being participants in the micro-business projects, and 212 underage ex-combatants were identified across Colombia's major cities. These three groups were not selected under perfectly random conditions, which could introduce bias into the sample.<sup>9</sup>

The resulting sample includes demobilized persons living in seventy-three different municipalities in twenty departments. It includes 232 women and 1,253 men, 846 former members of the AUC, 476 former members of the FARC, 119 former members of the ELN, and 36 individuals from other illegal armed groups. One hundred and ninety-four respondents were older than forty years of age, 857 were between twenty-five and forty years of age, and 429 were younger than twenty-five years of age. Seven hundred and ninety-one demobilized people reported having a job, while 694 (47 percent) reported being unemployed.

Even with the sources of potential sampling bias, the sampling procedures still permit the construction of a relatively representative sample compared to other surveys of ex-combatants. To assess representativeness, we can compare aggregated characteristics of the ACR survey with available aggregate data on these same characteristics from ACR reports on the total population of reintegrating ex-combatants. These comparisons indicate that the FIP sample slightly over-sampled individuals from the FARC and from the East Andean region, but that the sample and total population proportions closely coincide for gender and employment.

The FIP survey data were then matched by the ACR to police records data held by the ACR and we were then provided with the deidentified joined data. The data include information on individuals who were arrested by the police or captured during military operations through June 30, 2012. This resulted in 1,226 successfully matched individuals across the two data sets. Of the matched individuals, 197 were known recidivists who were captured for committing a crime.<sup>10</sup> Based on the timing of the survey and police data, all respondents had approximately four years from completion of the survey to possibly become recidivists. However, since the individuals demobilized at different times, there is variation in the amount of post-demobilization time during which individuals in the sample could potentially become recidivists, the longest being nine years from the time an individual demobilized (the earliest respondent demobilized in 2003).<sup>11</sup>

To further verify the quality and representativeness of the data with respect to the dependent variable of recidivism, we are again able to make additional comparisons with the total population of ex-combatants. Despite some of the previously noted differences between the sample and population, according to a descriptive ACR

study on recidivism among the entire population of ex-combatants, there appear to be similar aggregate rates of recidivism among the sample (14 percent were recidivists) and the larger population of program participants (15.2 percent).<sup>12</sup> Individuals in our sample were therefore on average no less likely to go back to crime than the general population of ACR ex-combatants. The sample thus does not appear to solely consist of reformed individuals to whom the idea of participating in a research study was appealing.

To illustrate some of the quantitative findings of our study, we draw on ninety-eight interviews with former paramilitary and guerrilla fighters that were conducted between 2008 and 2010 (only a small portion of which are reported here).<sup>13</sup> This interview material was mainly collected in four municipalities: Bogotá, Medellín, Tierralta, and Barrancabermeja. These municipalities provide variation in conflict histories, criminal dynamics, population size, and rural versus urban settings. Interviews were conducted mainly with former paramilitaries (sixty-nine), but also with former guerrillas (twenty-nine). While most of the interviews were organized with the help of the ACR, some interviewees were found through other channels (fifteen). The interviews were open-ended, inquiring especially about experiences with the reintegration process, including the attractiveness of illegal alternatives.

### *The Dependent Variable: Measuring Recidivism*

We measure the dependent variable of ex-combatant recidivism in several different ways. In contrast to previous studies, we do not rely on perceptions, opinions, or speculation and are instead able to construct several behavioral indicators of recidivism.

We use an indicator of whether individuals were captured for crimes along with the dates of the last crimes they committed, with crimes defined as infractions of the Colombian penal code.<sup>14</sup> Table 1 displays the distribution of types of crimes for which individuals were last arrested according to the articles of Colombia's penal code. The highest categories of crimes in our sample are for illegal arms possession and trafficking (thirty-seven), drug possession and trafficking (twenty-two), homicide/disappearance (twenty-two), and organized crime (nineteen), which was commonly associated with paramilitarism. Arrests for terrorism and rebellion, event categories most associated with guerrilla groups, are relatively few. This overview suggests that while some crimes by former combatants in Colombia may be politically motivated, many are not.

We use the penal codes to attempt to distinguish among different types and severities of recidivism by disaggregating the captures by types of crime. We use this information to create an additional, disaggregated dependent variable of organized crime (see Table 1). In some cases, this may mean individuals are joining or rejoining illegal criminal gangs or illegal armed groups (e.g., guerrillas or criminal bands). One hundred and thirteen crimes, or 57 percent of all crimes, involve these kinds of offenses that could be reasonably associated with criminal bands or

**Table 1.** Number of Arrests of Ex-combatants in Sample by Type of Crime.

Category (penal code)	Number of arrests	Organized crime
Illegal arms possession and trafficking (Art. 365)	37	X
Drug possession and trafficking (Art. 376)	22	X
Homicide (Art. 103)	20	X
Organized crime (Art. 340)	19	X
Personal injuries/assault (Art. 111)	15	X
Intrafamilial violence (Art. 229)	11	
Mugging (Art. 239)	11	
Fraud (Art. 246, 291, 306, 447)	8	
Vandalism (Art. 30, 265)	7	
Rape (Art. 205, 206, 208, 209, 211)	7	
Extortion (Art. 244)	7	X
Theft (Art. 239)	5	
Rebellion (Art. 467)	5	X
Alimony payment (Art. 233)	4	
Extortory kidnapping (Art. 169)	3	X
Forced disappearance (Art. 165)	2	X
Terrorism (Art. 343)	2	X
Using military uniform (Art. 346)	2	X
Jailbreak (Art. 442)	2	X
Illegal recruitment (Art. 162)	1	X
Plagiarism (Art. 271)	1	
Monopoly/antitrust (Art. 312)	1	
Illegal mining (Art. 338)	1	
Violence against officer (Art. 429)	1	
Contempt of court (Art. 442)	1	

Note: X indicates that the crime is included in the organized crime variable.

belligerent groups. Summary statistics for the dependent and independent variables are presented in Table 2.<sup>15</sup>

Our research design partially depends on police enforcement and requires that some middle number of ex-combatants in the society be recidivists who get caught. This is due to what we call a “recidivism paradox.” If ex-combatants are so nefarious and the justice system is so weak that many ex-combatants are recidivists but escape arrest, there will not be sufficient variation in the sample to explain outcomes. However, if there are few recidivists or few recidivists are able to escape arrest, it would imply perfectly reintegrated fighters or perfect policing and monitoring, in which case there would be no reason for a study of recidivism. It is ideal to have perfect measurement of ex-combatants and their postdemobilization behaviors, but if such measurement is possible, a study becomes unnecessary. To address this challenge of variable detection of ex-combatant crimes from one location to another in our analysis, we include an indicator for the overall police capture rate for homicides by municipio (municipality).

**Table 2.** Summary Statistics.

Variables	Observations	Mean	SD	Minimum	Maximum
Recidivist	1,226	0.16	0.37	0	1
Organized crime recidivist	1,182	0.10	0.29	0	1
Personal motives	1,217	0.15	0.36	0	1
Greed motives	1,217	0.27	0.44	0	1
Lost status/power	1,226	0.08	0.26	0	1
Time in group	1,195	6.08	5.01	0	38
Total armed actions (2007–2008)	1,194	13.45	11.98	0	42
Contact any ex-combatant	1,226	0.80	0.40	0	1
Employed	1,220	0.56	0.50	0	1
Education increase	1,144	0.19	0.39	0	1
Family accept	1,219	0.91	0.29	0	1
Have children	1,226	0.76	0.42	0	1
Capture rate	1,194	0.59	0.27	0.11	1.80
BACRIM (2010)	1,194	0.87	0.34	0	1
Coca (ha)	1,226	107.33	356.39	0	1,486
FARC	1,226	0.31	0.46	0	1
ELN	1,226	0.07	0.26	0	1
Age	1,226	30.39	7.90	18	64
Male	1,215	0.85	0.36	0	1
Minor at demobilization	1,217	0.13	0.34	0	1
Live in the same place	1,226	0.23	0.42	0	1
Caribbean region	1,226	0.22	0.41	0	1
Pacific region	1,226	0.01	0.12	0	1
Andean region	1,226	0.23	0.42	0	1
East Andean region	1,226	0.46	0.50	0	1
Amazon region	1,226	0.03	0.16	0	1
Eastern region	1,226	0.05	0.22	0	1

Note: SD = standard deviation; BACRIM = *Bandas Criminales* (Criminal Bands); ELN = *Ejército de Liberación Nacional* (National Liberation Army); FARC = *Fuerzas Armadas Revolucionarias de Colombia* (Revolutionary Armed Forces of Colombia).

With our data on reintegration “failures” that vary over time, we are able to produce several Kaplan–Meier survival graphs to describe patterns in recidivism (Figures 1 and 2). These graphs show the (estimated) fraction of the entire sample (or different subsamples) that has survived (not failed) over time from when individuals become susceptible to failure (demobilization date) until the end of the study (June 30, 2012).

These graphs indicate gradual declines in survival rates over time, suggesting that some individuals become recidivists early on and that others are vulnerable to recidivism in the later postdemobilization period. There also appear to be slightly lower recidivism rates for guerrillas (Figure 1; vs. paramilitaries) and those who attained higher levels of education across the period of study (Figure 2). These patterns are scrutinized further in the statistical models.

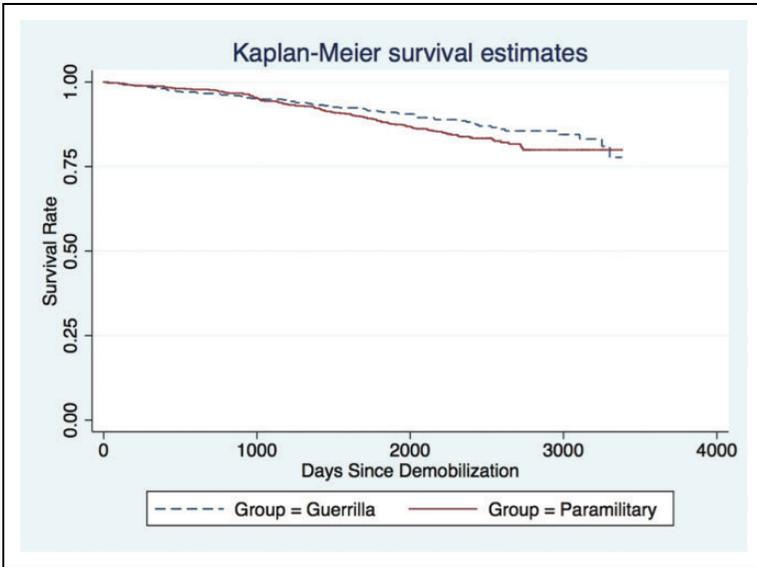


Figure 1. Recidivism estimates by armed group.

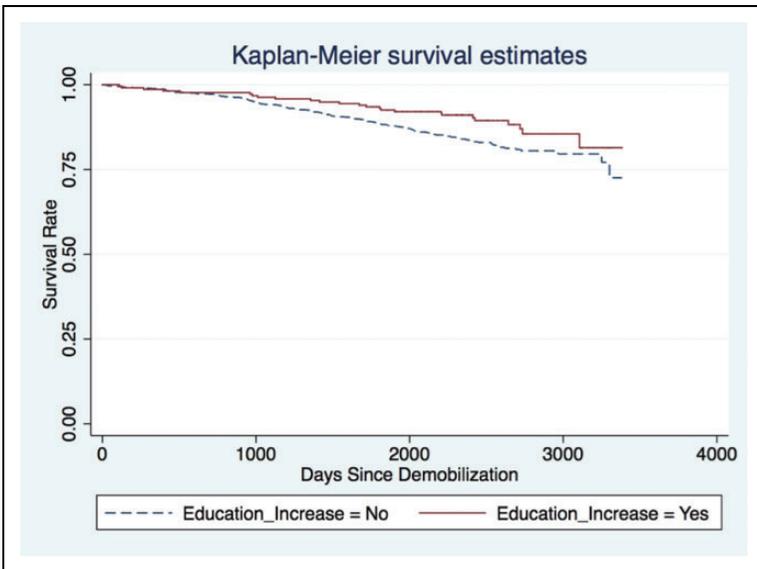


Figure 2. Recidivism estimates by education program completion.

## Independent Variables

To account for *economic strain*, we include a variable for whether or not the ex-combatants are employed as an indicator for an individual's economic prospects. Jobs and livelihoods are emphasized by a large literature as well as the ACR program as key for economic survival and self-fulfillment and, consequently, preventing recidivism. In some models, we also include a time since demobilization variable to account for the time ex-combatants have had to adapt to civilian life.

To account for the *security dilemma* ex-combatants may face, we include a measure for total armed actions for 2007 and 2008 in each municipio, which is a composite of actions recorded by guerrilla groups and members of the government public security forces from the Colombian vice-presidency's Human Rights Observatory.

We capture the hypothesis about *opportunities and social networks* with three indicators. First, we account for the influence of the spoiler armed groups that emerged after the paramilitary demobilization, commonly referred to as "criminal bands" or BACRIM (Bandas Criminales).<sup>16</sup> Many BACRIM are composed of remnant or remobilized paramilitary groups and are frequently involved in illicit activities such as drug trafficking, mining, extortion, and so on.<sup>17</sup> These groups may provide opportunities and entice ex-combatants to return to illegal activities or may create a threatening environment that may drive them to join other bands for protection. We measure the impact of BACRIM through a binary indicator from the Non-governmental Organization (NGO) Indepaz from the first semester of 2010 for whether or not a municipio registered presence of BACRIM. Second, we include a municipality-level measure for coca cultivation to specifically account for drug trafficking as a financial draw for ex-combatants. Third, to account for the role of ex-combatant networks and the socialization patterns of ex-combatants, we use an indicator for whether individuals reported that they had contact with any ex-combatants.

To account for *preferences for a violent lifestyle*, we use a personal motives dummy variable to measure whether an individual's motives for originally joining an armed group included power, status, respect, adventure/fun, affinity for firearms, or being rejected for service in the army. We proxy for greed motives with an indicator for whether original motives for joining an armed group included income or promises of money (although this could also indicate previous poverty). We also include an indicator for whether ex-combatants reported feeling a loss of "power" or "status" in demobilization. We measure the levels of individuals' previous commitment to (and possible indoctrination by) their armed groups with a variable for time in group.

We include two measures about individuals' family lives in the postdemobilization period in line with theories of *social control* that act as restraining forces on recidivism. We include variables for whether individuals feel accepted by their families and whether they have children. To estimate reintegration program effects, we use an education increase variable that measures the progress in education level

between the 2008 survey and 2012 by differencing the survey responses from additional observational data provided by the ACR. This variable is analyzed in a separate section.

### **Control Variables**

In addition to the variables for our core hypotheses, we include a series of control variables that might also be associated with recidivism. We first include variables for the armed group that an individual previously belonged to, whether the guerrillas (ELN or FARC) or paramilitaries. Guerrillas are likely less prone to recidivism relative to paramilitaries since they were more likely to have fled from their group while paramilitaries demobilized through collective agreements, which some individuals may have opposed (see also Ribetti 2009).

We also include the age and gender of individuals since they are found to be significant predictors of recidivism in the criminology literature and life-course theory, with women and older populations thought to be less likely to return to crime (Greenberg 1985; Pollock 1999). We include an indicator for ex-combatants who demobilized as minors. Prior studies find that minor ex-combatants have stronger motivations for revenge and aggressive behavior (Bayer, Klasen, and Adam 2007). We also control for education levels that are indicated by whether individuals graduated high school.

A live same place variable captures whether or not ex-combatants return to live in the towns where they grew up and helps account for possible self-selection into more or less hostile communities or environments. To control for policing capacity (both as deterrence and to normalize arrest probabilities across locations), we include an indicator of the rate of homicide captures at the municipio level. We further include dummies for Colombia's six main geographic regions to account for unmeasured geographical heterogeneity across observations.<sup>18</sup>

### **Modeling Recidivism**

With our time-varying observations on ex-combatant captures, we are able to use more sophisticated models for estimating predictors of recidivism than previous studies.<sup>19</sup> We use Cox Proportional Hazard models (also referred to as survival or duration models; see Online Appendix for logit models that predict the probability that an ex-combatant commits a crime). These models estimate how independent variables affect the risk of "failing" and becoming a recidivist in a particular moment, conditional on surviving, or not going bad, up until then. We also construct separate sets of models for both ex-paramilitaries and ex-guerrillas since different patterns of socialization within the groups and varying demobilization modalities may have led to different recidivism dynamics. These models have been used in recidivism studies of ex-convicts by criminologists (e.g., Sedgley et al. 2010; Uggen 2000) and can be practical if the right kind of data is available.

**Table 3.** Cox Survival Models of Recidivism.

	Model 1 Recidivism	Model 2 Recidivism	Model 3 Organized crime recidivism	Model 4 Organized crime recidivism
Personal motives	1.534 <sup>†</sup> (0.359)	1.570 <sup>†</sup> (0.364)	1.726 <sup>†</sup> (0.485)	1.755* (0.489)
Greed motives	1.273 (0.287)	1.263 (0.288)	1.160 (0.333)	1.173 (0.339)
Time in group	1.043* (0.0212)	1.041* (0.0211)	1.077** (0.0260)	1.075** (0.0261)
Total armed actions (2007–2008)	0.996 (0.0121)	0.995 (0.0124)	0.999 (0.0149)	0.998 (0.0151)
Contact any ex-combatant	0.866 (0.208)	0.877 (0.209)	0.711 (0.200)	0.728 (0.203)
Employed	0.804 (0.147)	0.818 (0.150)	0.936 (0.207)	0.932 (0.208)
Education increase	0.654 <sup>†</sup> (0.168)	0.599* (0.156)	0.409* (0.151)	0.377** (0.141)
Family accept	0.529* (0.147)	0.478** (0.132)	0.435** (0.139)	0.411** (0.133)
Have children	0.601* (0.131)	0.573* (0.127)	0.494** (0.134)	0.486** (0.135)
Capture rate	0.486 (0.296)	0.527 (0.314)	0.211* (0.167)	0.241 <sup>†</sup> (0.185)
BACRIM (2010)	2.575* (1.213)	2.711* (1.295)	2.092 (1.043)	2.169 (1.088)
Coca (ha)	1.000 (0.0003)	1.000 (0.0003)	1.000 (0.0003)	1.000 (0.0003)
FARC	0.560* (0.149)	0.535* (0.146)	0.651 (0.209)	0.611 (0.203)
ELN	0.487 <sup>†</sup> (0.209)	0.476 <sup>†</sup> (0.206)	0.346 <sup>†</sup> (0.204)	0.339 <sup>†</sup> (0.201)
Age	0.977 (0.0152)	0.978 (0.0152)	0.964 <sup>†</sup> (0.0198)	0.963 <sup>†</sup> (0.0195)
Male	3.008* (1.304)	2.770* (1.208)	2.272 (1.140)	2.130 (1.077)
Minor at demobilization	0.681 (0.232)	0.656 (0.224)	0.703 (0.295)	0.678 (0.285)
Live in the same place	0.720 (0.183)	0.778 (0.198)	0.812 (0.243)	0.869 (0.259)
Observations	1,011	951	1,011	951
Region effects	Yes	Yes	Yes	Yes
Log likelihood	−764.67	−483.53	−495.12	−483.53

Note: Coefficients are hazard ratios. Robust standard errors are given in parentheses. Models 2 and 4 include only individuals who initially had not graduated high school. BACRIM = *Bandas Criminales* (Criminal Bands); ELN = *Ejército de Liberación Nacional* (National Liberation Army); FARC = *Fuerzas Armadas Revolucionarias de Colombia* (Revolutionary Armed Forces of Colombia).

<sup>†</sup> $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Empirical Results

The empirical results for the Cox Hazard models are presented in Tables 3 and 4. For ease of interpretation, the Cox models report exponentiated hazard ratios rather than coefficients, where a ratio greater than one indicates an increase in the risk of recidivism at any given time while values less than one indicate a decrease in the risk of recidivism. All models use robust standard errors. The results show that recidivism can occur through multiple crimes and that there are multiple motives for and pathways to recidivism.

The models confirm that former FARC and ELN are generally less likely to become recidivists relative to former paramilitaries (approximately 50 percent less

**Table 4.** Cox Survival Models of Recidivism by Armed Group.

	Model 1 Recidivism guerrilla	Model 2 Recidivism paramilitary	Model 3 Recidivism paramilitary
Personal motives	1.696 (0.674)	1.329 (0.416)	1.292 (0.429)
Greed motives	1.954 (1.089)	1.053 (0.268)	1.157 (0.300)
Lost power/status			1.840 <sup>†</sup> (0.593)
Time in group	1.068 (0.0469)	1.019 (0.0280)	1.015 (0.0277)
Total armed actions (2007–2008)	1.002 (0.0218)	0.986 (0.0161)	0.985 (0.0165)
Contact any ex-combatant	1.500 (0.753)	0.691 (0.199)	
Employed	1.053 (0.370)	0.661 <sup>†</sup> (0.149)	0.605 <sup>†</sup> (0.178)
Education increase	0.367 <sup>†</sup> (0.203)	0.722 (0.221)	0.722 (0.170)
Family accept	0.641 (0.323)	0.485* (0.173)	0.712 (0.224)
Have children	0.542 (0.236)	0.629 (0.179)	0.518 <sup>†</sup> (0.187)
Capture rate	1.182 (1.452)	0.737 (0.498)	0.721 (0.211)
BACRIM (2010)	6.591 (8.522)	1.961 (1.097)	0.917 (0.618)
Coca (ha)	1.000 (0.0016)	1.000 (0.0003)	2.053 (1.172)
FARC	1.051 (0.569)		
ELN			
Age	0.970 (0.0413)	0.976 (0.0174)	0.977 (0.0181)
Male	3.453 <sup>†</sup> (2.533)	2.282 (1.202)	
Minor at demobilization	0.711 (0.400)	0.697 (0.349)	0.674 (0.353)
Live in the same place	2.363 (2.474)	0.609 <sup>†</sup> (0.164)	0.652 (0.178)
Observations	384	602	548
Region effects	Yes	Yes	Yes
Log likelihood	−164.74	−503.78	−472.64

Note: Coefficients are hazard ratios. Robust standard errors are given in parentheses. Model 3 includes only male paramilitaries. BACRIM = *Bandas Criminales* (Criminal Bands); ELN = *Ejército de Liberación Nacional* (National Liberation Army); FARC = *Fuerzas Armadas Revolucionarias de Colombia* (Revolutionary Armed Forces of Colombia).

<sup>†</sup> $p < .1$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

likely than paramilitaries according to model 1 and the logit models given in the Online Appendix), as are women (64 percent less likely), and those with social and familial restraints, such as those who have children (40 percent less likely), or report being accepted by their families (47 percent less likely). An ex-paramilitary's account underscores this restraining power of having a family in later phases of reintegration, "If I don't find any work these days, I will go back again. I have nothing to lose since I have no wife, no children, no nothing."<sup>20</sup> Relatedly, and parallel to the criminology literature, being older also decreases recidivism (not shown; being older is collinear with having children and is only significant when it is excluded). Former paramilitary commander, alias El Alemán, affirmed this pattern when he said, "An old guy like me at 42, after being in war from 19 to 32 years old and then 9 years in prison, I'd have to have shit for brains [literally, have "mental diarrhea"] to take up arms again" (VerdadAbierta.com 2015).

Increased educational attainment, as indicated by completing high school while in the ACR program, is also associated with lower recidivism. Police presence, reflected by the police capture rate by municipio, also appears to reduce recidivism, although it is only statistically significant in models 3 and 4 (for organized crime). Its inclusion does not substantively alter the results of other variables.

Factors that are strongly and significantly associated with increased recidivism include strong personal motives for initially joining an armed group (53 percent more likely), the time spent in an armed group, and presence of BACRIM (158 percent more likely). The correlation of personal motives with recidivism adds confidence to the validity of our outcome variable since, if ex-combatants are time-consistent, strong initial tendencies toward illegality should predict later crimes and arrests. A feeling of loss of “status” or “power” in demobilization is also associated with increased recidivism (84 percent more likely) among male paramilitaries (though not guerrillas) at near conventional levels of significance (model 3 of Table 4;  $p < .06$ ).<sup>21</sup> These factors suggest that some hardened ex-combatants may be especially prone to recidivism.

BACRIM presence has a stronger effect than the total armed actions variable and suggests an explanation of opportunities for criminal activity over mere personal insecurity (even after controlling for the capture rate). As one respondent observed, government support can pale in comparison to what some might be able to earn with armed bands, as one was receiving “almost three million pesos per month [\$1,500 USD].” By contrast, the ACR payments were far lower, “Here [at the ACR], they give you 400,000 pesos [\$200 USD]. Imagine the difference of three million pesos!”<sup>22</sup> Despite the nonsignificance of the total armed actions and contact any ex-combatant variables, security dilemmas and preexisting networks might still be related to reengagement in violence, as an account from an ex-paramilitary in Tierralta illustrates, “When the killings of the demobilized people began, the majority of us [ex-combatants] were thinking about regrouping ourselves and entering the group for protection.”<sup>23</sup>

Returning to live in the same place as prior to joining an armed group is not significant, as returnees are no more inclined to be recidivists in their communities than newcomers (per model 2 of Table 4, some paramilitary returnees in fact may be less inclined). It is therefore unlikely that a strong selection process is at play whereby individuals with greater proclivities for returning to illegal activities are sorting out to more dangerous locales. If anything, living in the same place is associated with lower recidivism, perhaps due to greater family ties, as many returnees reported seeking out their families.

The results also contain some surprising nonfindings. We find no significant general effect of employment on recidivism, even though many reintegration programs emphasize jobs for successful reintegration. However, when the sample is disaggregated according to previous armed group, a differential effect of employment on recidivism emerges: having a job does not appear to affect recidivism of former guerrillas (model 1 of Table 4) but is negatively associated with

ex-paramilitary recidivism at  $p < .1$  (model 2 of Table 4). This is consistent with claims that paramilitaries are generally more economically motivated while guerrillas tend to be more ideologically motivated (according to the FIP survey, while active, paramilitaries were more than three times more likely to receive salaries than guerrillas, see Online Appendix). One explanation for the limited effect of employment may be that ACR support helps alleviate economic strain for unemployed ex-combatants. As an ex-paramilitary trying to stay on the right side of the law noted, "I depend on the government's help almost 100 percent, because at the moment we haven't got any employment, we have nothing."<sup>24</sup>

Illegal economic activities are common in Colombia, but greed motives are also not associated with greater recidivism, even though some of the recidivists in the sample were arrested for economic crimes, such as extortion or drug trafficking, and some interviews refer to such activities. Similarly, whether coca is grown in the municipio where an individual resides does not significantly predict increased recidivism after controlling for BACRIM presence. Ex-combatants who demobilized as minors are less likely to commit crimes, but not significantly. Associating with other ex-combatants is also not significant and does not appear to necessarily place an individual at greater risk of recidivism.

These results are largely consistent across model specifications and whether using the regular crime outcome variable in models 1 and 2 in Table 3 or the more restrictive organized crime variable in models 3 and 4. The results related to family and demographic predictors are consistent with criminological findings from Colombia (Klevens et al. 2000). However, the results for personal motives, time in group, and BACRIM comprise drivers that are specific to ex-combatant recidivism. The models also indicate which individuals in the sample have high propensities to commit crimes and be captured and are the next likely recidivists.

### *Testing ACR Reintegration Program Effects*

With our survey data, we are able to examine some reintegration program variables to see whether specific kinds of program interventions are associated with the calculus of ex-combatants to return to crime.<sup>25</sup> One of the ACR program's core components is remedial education to bring reintegrating fighters up to basic levels of educational attainment (consisting of six modules). Many ex-combatants had disadvantaged childhoods and came out of their respective armed groups with low levels of education (90 percent of those sampled had not graduated high school). As an indicator for the ACR's education program, we are able to calculate an education level increase variable by differencing responses about levels of educational attainment from the time of demobilization, the time of the survey, and the time of censoring. According to this variable, 19 percent of our sample went on to obtain their high school equivalency through the ACR program.

The models in Table 3 show that individuals who obtained their high school diplomas during their reintegration process between 2008 and 2012 were

significantly less likely to return to crime than those who did not. Educational attainment is associated with decreased recidivism for former guerrillas (Table 4, model 1) but not for former paramilitaries (Table 4, model 2; perhaps because guerrillas had lower average initial levels of education and were younger). However, the education increase variable could perhaps reflect the self-selection of individuals into (or out of) education programs, indicating the outcome of recidivism (or reintegration failure), rather than a predictor of recidivism (e.g., if individuals decided not to pursue education because they wanted to commit crimes). We acknowledge this concern but believe it is reduced by controlling for the various personal reasons for recidivism in the regression models (such as family ties and motives for joining armed groups).

To further address selection issues, we use a propensity score matching technique to compare recidivism outcomes across individuals with similar likelihoods of participating in the education program. We match individuals on observable characteristics using a probit model of the full specification of independent variables from the previous models and compare the difference in recidivism (capture) rates across the treated and untreated groups.<sup>26</sup> The matching model in Table 5 shows that initial levels of education, age, gender, and being a minor are significant predictors of obtaining a high school degree. The results in Table 6 indicate that there is a sizable and significant difference in recidivism rates among education-treated and untreated individuals, with those obtaining a diploma 44 percent less likely to commit crimes.

The importance of education programs is consistent with additional survey responses of ex-combatants about different aspects of the ACR program and interview accounts (Figure 3). When asked, “what part of the program has been most helpful for your reintegration?”, a plurality of 28 percent cited the ACR’s basic education program (an additional 11 percent cited technical training). Similarly, a majority of ex-combatants (56 percent) stated that a main advantage of demobilizing is being able to study (more than any other response). The education program is popular because, as one ex-combatant reported, there is a large need and demand for it, “I lack education, and there’s not even work on construction sites. I survive thanks to the help of the government.”<sup>27</sup> Additionally, as noted by another ex-combatant, the reintegration program and employment can come and go while education provides basic and lasting skills, “This [reintegration program] won’t last forever. But, if I finish my studies, I’ll always have that. I’ll be able to get by, find a job, and improve my quality of life.”<sup>28</sup>

Some people reported frustration with the implementation of other ACR program elements, such as humanitarian assistance payments (some payments were delayed) and seed capital for business projects. However, according to our data, varying access to these programs and complaints about them are not significantly associated with either a lower or greater likelihood of committing crime (perhaps because complaints could also indicate some minimal level of engagement in the program).

**Table 5.** Propensity Matching for Education Increase.

	Education increase
Personal motives	0.140 (1.00)
Greed motives	-0.029 (0.24)
Time in group	0.004 (0.38)
Total armed actions (2007–2008)	0.002 (0.30)
Contact any ex-combatant	0.090 (0.71)
Employed	-0.150 (1.43)
Education level at demobilization	0.441 (7.87)***
Family accept	-0.096 (0.54)
Have children	-0.332 (2.74)**
Capture rate	-0.189 (0.62)
BACRIM (2010)	0.271 (1.37)
Coca (ha)	-0.000 (0.97)
FARC	-0.173 (1.21)
ELN	0.123 (0.58)
Age	0.022 (2.73)***
Male	-0.521 (3.60)**
Minor at demobilization	0.464 (2.80)**
Live in the same place	-0.033 (0.25)
Region effects	Yes
N	982

Note: Sample includes only individuals who had not initially completed high school. BACRIM = *Bandas Criminales* (Criminal Bands); ELN = *Ejército de Liberación Nacional* (National Liberation Army); FARC = *Fuerzas Armadas Revolucionarias de Colombia* (Revolutionary Armed Forces of Colombia).

† $p < .1$ . \* $p < .05$ . \*\* $p < .01$ .

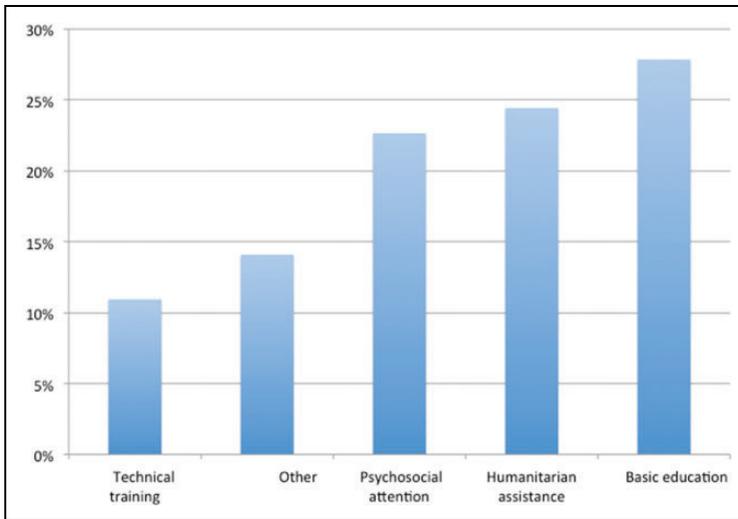
**Table 6.** Average Treatment Effect of Education Increase on Recidivism.

Variable sample	Treated	Controls	Difference	t statistics
Unmatched	0.09	0.13	-0.05	-1.79
Recidivism ATT	0.09	0.15	-0.06*	-2.46

Note: ATT = average treatment effect on the treated; \* =  $p < .05$ .

## Conclusion and Implications

This study adapted a new method to evaluate the drivers of the recidivism of ex-combatants in the context of DDR programs. The improved techniques were applied to a representative sample of former guerrillas and paramilitaries in Colombia to take some of the guesswork out of measuring recidivism, perhaps the most harmful form of reintegration failure at the individual level. We developed a comprehensive theory about recidivist behavior, and our analysis indicates that it is shaped by a mix of both driving and restraining factors.



**Figure 3.** Ex-combatant perceptions of the reintegration program according to responses to the question, “What part of the program has been most helpful for your reintegration?”

First, we find that an increased likelihood of recidivism is strongly associated with strong personal motives for initially joining armed groups (indicating an enduring preference for a violent lifestyle) and the amount of time spent in such groups. Consistent with an opportunities theory from criminological studies, living in the midst of criminal bands can lure ex-combatants into crime and increases the likelihood of recidivism. Second, in line with the restraining forces posited by social control theories, ex-combatants may have stronger prospects for successful reintegration (and less recidivism) if they have strong family ties, have children, and are deterred by effective policing. In some cases, drivers may be mediated by restraints, as, for example, long tenures as combatants may be mediated by the recidivism-reducing effect of ageing out of crime.

Some conventional explanations found little or no support. Only partial support was found for indicators of economic strain, with a weak association between employment and recidivism only among ex-paramilitaries, perhaps because of the financial support provided by the reintegration program. There is also little evidence that recidivism is the result of a security dilemma that ex-combatants may face, except in the interview accounts from rural areas (in part because many ex-combatants settle in urban areas, where open military contestation and combat is not a factor). Still, by improving upon the previously used perceptual measures of recidivism with behavioral, dynamic measures, we were able to identify cross-temporal variation in vulnerabilities in the postdemobilization phase for ex-combatants—with steady risks even several years after demobilization—that previous studies could not.

This study holds important policy implications for Colombia as the ACR continues to make adjustments to its programs to reintegrate fighters and the government negotiates a peace agreement with the FARC. First, it highlights recidivism differences across armed groups. There are overall lower risks for guerrillas than paramilitaries, in part because guerrillas are more likely to have fled their groups and do not want to return to them. Some recidivism factors also vary across groups, so DDR should be tailored to group-specific needs. For instance, guerrillas, tending to be poorer and less educated, may be more influenced by educational opportunities, while paramilitaries may be more influenced by employment opportunities.

Second, the findings provide warning signs for which kinds of individuals from the FARC might be vulnerable to recidivism. Individuals with weak family ties, inclinations toward violence because of their combatant baggage, antisocial personality traits, strong motives for originally having joined the group, or that suffer loss of status or prestige may merit special attention from DDR programs.

Third, the findings call for a gender-sensitive approach to reintegration. Men are significantly more prone to recidivism than women, and their feelings of loss of status after demobilization can be emasculating and turn into emotional impulses toward illicit activities. While women may not present great recidivism risks, they also have unique reintegration challenges that must be addressed, including, in some instances, recovering from sexual violence.

Fourth, the findings also suggest that some interventions can help keep people on the right path. Education programs are valued by ex-combatants and appear to aid them in the following alternative life paths. Programs should also look beyond the individual ex-combatant and focus on strengthening families as a key mechanism of restraint. This may include facilitating the return of some ex-combatants (especially former paramilitaries) to live near their families so they rejoin their prewar social networks. Psychosocial screening and counseling may help some ex-combatants come to terms with their new situations or loss of status, or address hardened ex-combatants who spent significant time in armed groups. Lastly, since policing is found to play a role in deterring severe, organized crimes (which could be stepping stones to broader collective remobilization), additional policing may be prudent in areas with concentrations of ex-combatants.

These findings have special applicability for dealing with the growing threat of (and limiting rerecruitment to) the criminal bands, or BACRIM, in Colombia that are partially composed of ex-combatants. Efforts to limit recidivism of both existing paramilitary ex-combatants and a new influx of FARC ex-combatants can help limit the growth of criminal bands and ensure they do not fill any security vacuum that might arise from a FARC demobilization. However, questions remain about how similar existing members of the FARC are to the pool of ex-combatants currently participating in ACR programs. Current members of the FARC may share similarities with FARC ex-combatants, but could also share similarities with the collectively demobilized paramilitaries if they end up demobilizing in the same manner.

The findings have implications for other conflicts as well, especially as states increasingly focus on Countering Violent Extremism (CVE), since individuals who have taken up arms once may be prime candidates to do so again. Indeed, recidivism has posed a challenge in postconflict cases from El Salvador (Guáqueta 2009) to Côte d'Ivoire (Human Rights Watch 2014). The findings may travel well to settings where there are continuing challenges with reintegration and at least moderately effective police forces. In general, the findings about the common restraining factors of family ties, age, and policing are likely important in many different contexts. However, particular findings may only travel to the extent that DDR programs in other countries are implemented similarly. For instance, employment may be relatively more helpful for suppressing recidivism where DDR programs are weak but was not found to be widely helpful in Colombia, perhaps because of the base level of humanitarian assistance provided by the ACR. Colombia is also distinct for having executed DDR programs during ongoing armed conflict, which may heighten security threats to ex-combatants and increase opportunities for recidivism relative to postconflict settings. Our findings may therefore be more generalizable to countries implementing reintegration programs prior to the cessation of hostilities, such as Afghanistan and the Philippines.

To further develop the methodology we use here, future studies and designs of DDR programs should consider monitoring programs to survey the same ex-combatants over several waves and that can be fused with police records. Extended periods of study will help provide greater insight into ex-combatants' long-term prospects for either recidivism or reintegration.

### **Acknowledgments**

We are grateful to the Fundación Ideas para la Paz and Juan Carlos Palou as well as the Agencia Colombiana para la Reintegración for making their data available. We thank Desha Girod, Dean Piedmont, Jake Shapiro, and Fredrik Ugglá for valuable comments. We also thank participants at the APSA, ALACIP, and Jan Tinbergen conferences and seminar participants at Stockholm University, Universidad de los Andes, and the University of Denver for their feedback.

### **Authors' Note**

Both the authors contributed equally to this work. All translations are by the authors from the Spanish. All mistakes are our own. Replication files and Online Appendix are available on the journal website and at <http://mysite.du.edu/~okaplan2>.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### **Funding**

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Oliver Kaplan was supported by a postdoctoral fellowship

from the Empirical Studies of Conflict project and the US Department of Defense Minerva Research Initiative (Air Force Office of Scientific Research grant no. FA9550-09-1-0314). Enzo Nussio was supported by a Swiss National Science Foundation Prospective Researcher Fellowship.

## Notes

1. We follow criminologists in taking “recidivism” to reflect repeat offenses, which need not be the same as the crime originally committed. Some crimes by ex-combatants in Colombia may presage broader political conflict more than others.
2. Fundación Ideas para la Paz (FIP 2014) recently estimated a recidivism rate of 24 percent, calculated for a longer time period.
3. Contrasting accounts by McEvoy and Shirlow (2009) based on Northern Ireland suggest ex-combatants have strong leadership potential and can contribute to peacebuilding processes.
4. FARC: 13,691, ELN: 2889, AUC: 3682, and other armed groups: 486.
5. Since 2011, Colombian Agency for Reintegration.
6. See Online Appendix for survey questions used in our analysis. This survey was also used in earlier studies by Kaplan and Nussio (2015) and Oppenheim et al. (2015).
7. Similar to other studies on ex-combatants, our sample does not include the approximately 17,000, demobilized fighters who did not participate in the High Advisory for Reintegration (ACR) program in 2008.
8. Sampling procedures are described in “Encuesta a desmovilizados, Ficha técnica (technical sheet),” FIP Bogotá, June 2008.
9. It is unfortunately not possible to identify the type of sampling used for each subject in the database since some individuals in the populations who were oversampled using the secondary procedures were included in the initial random sample as well. However, our results are robust to the exclusion of the subpopulations that were less likely to have been sampled randomly.
10. The ACR distinguishes between “proven” and “potential” recidivism. Proven recidivists have been convicted for a crime or killed in battle with government forces. Potential recidivists were caught in the act of a crime or are facing trial. Our set of recidivists includes seventy-four proven and ninety-nine potential recidivists as well as an additional twenty-four arrested but unclassified ex-combatants.
11. The reintegration program was executed by the Ministry of Interior Affairs until 2006.
12. The matching techniques used by the ACR to join the sample of individuals with their police records left 259 individuals unmatched. These are missing observations in the final data set. Balance tests are conducted in the Online Appendix to compare the aggregate characteristics of the matched and unmatched samples. Robustness tests indicate that results are consistent in models that include matched individuals identified as being most similar to unmatched individuals.
13. Interviews were translated from the Spanish and edited for clarity.
14. Forty-seven individuals are recorded as having committed multiple crimes. Our data only report information on each person’s last crime, not earlier crimes. Our tests are robust to

the inclusion of only individuals who committed one crime or no crimes, although this limits the sample.

15. According to the police data, thirty-two individuals in our sample were killed between being surveyed in 2008 and the end of the arrest data in mid-2012. These individuals consist of 2.6 percent of our sample, reflecting an ex-combatant homicide rate of 2,610 per 100,000 ex-combatants (this rate is about 100 times higher than the average homicide rate for all Colombians).
16. The total armed actions and criminal bands (or BACRIM) variables also help account for potential variation in the likelihood of being arrested (and thus appearing as a recidivist in our sample) across different regions of the country.
17. There is a contention about whether the armed groups that emerged after the demobilization of the AUC are pure BACRIM or also pursue limited political goals (Human Rights Watch 2010).
18. Results are also robust to the inclusion of department effects for the twenty departments where respondents resided.
19. Approximately one-quarter of recidivists (fifty-seven) were captured after demobilization but prior to the 2008 survey. We assume the survey responses of these individuals to questions about fixed (time invariant) personal characteristics are likely valid (e.g., “when were you born?”) and include them in the regression models. However, in robustness tests, we omit these individuals because their postcapture survey responses may be affected by having been captured (or may not be correlated with the precapture conditions). The results are consistent.
20. Interview with ex-paramilitary in Bogotá #1, January 2009 (Enzo Nussio, Interviewer).
21.  $p < .05$ , when the personal motives variable is excluded from the model.
22. Interview with ex-paramilitary in Tierralta #4, April 2009 (Enzo Nussio, Interviewer).
23. Interview with ex-paramilitary in Tierralta #1, April 2009 (Enzo Nussio, Interviewer). The “killings” refer to the considerable number of killings of ex-combatants in the department of Córdoba and specifically in Tierralta in 2007 and 2008 during confrontations among newly armed BACRIM.
24. Interview with ex-paramilitary in Tierralta #3, April 2009 (Enzo Nussio, Interviewer).
25. This analysis unfortunately faces limitations since the survey questions about programing are not detailed and individuals were not exogenously or randomly assigned to program treatments.
26. However, as with any matching technique, there could still be unobserved heterogeneity among the treated and control groups that is not correlated with the variables in the model and that determine both self-selection into the program and recidivism outcomes.
27. Interview with ex-paramilitary in Medellín #2, February 2009 (Enzo Nussio, Interviewer).
28. Interview with ex-paramilitary in Barrancabermeja #4, March 2009 (Enzo Nussio, Interviewer).

## Supplemental Material

The online [appendices/data supplements/etc.] are available at <http://jcr.sagepub.com/supplemental>.

## References

- Agnew, Robert. 2006. *Pressured into Crime: An Overview of General Strain Theory*. Los Angeles, CA: Roxbury.
- Agnew, Robert, and Helene Raskin White. 1992. "An Empirical Test of General Strain Theory." *Criminology* 30 (4): 475-500.
- Akers, Ronald L. 2009. *Social Learning and Social Structure: A General Theory of Crime and Deviance*. New Brunswick, NJ: Transaction.
- Bayer, Christophe Pierre, Fionna Klasen, and Hubertus Adam. 2007. "Association of Trauma and PTSD Symptoms with Openness to Reconciliation and Feelings of Revenge among Former Ugandan and Congolese Child Soldiers." *JAMA: The Journal of the American Medical Association* 298 (5): 555-59.
- Blattman, Christopher, and Jeannie Annan. 2011. "Reintegrating and Employing High Risk Youth in Liberia: Lessons from a Randomized Evaluation of a Landmine Action Agricultural Training Program for Ex-Combatants." Policy Report, IPA and Yale University, New Haven, CT.
- Bøas, Morten, and Anne Hatløy. 2008. "Getting In, Getting Out: Militia Membership and Prospects for Re-integration in Post-war Liberia." *The Journal of Modern African Studies* 46 (1): 33-55.
- CCDDR (Cartagena Contribution to Disarmament, Demobilization and Reintegration). 2009. *The Cartagena Contribution to Disarmament, Demobilization and Reintegration*. Cartagena, Colombia: CIDDR.
- CNMH (Centro Nacional de Memoria Histórica). 2013. *¡BastaYa! Colombia: Memoria de Guerra Y Dignidad*. Bogotá, Colombia: Centro Nacional de Memoria Histórica.
- Collier, Paul. 1994. "Demobilization and Insecurity: A Study in the Economics of the Transition from War to Peace." *Journal of International Development* 6 (3): 343-51.
- Conpes 3554. 2008. "Política Nacional de Reintegración Social Y Económica Para Personas Y Grupos Armados Ilegales." Consejo Nacional de Política Económica y Social República de Colombia, Departamento Nacional de Planeación, Colombia.
- FIP (Fundación Ideas para la Paz). 2014. "Retorno a La Legalidad O Reincidencia." Informes FIP, Fundación Ideas para la Paz, Bogotá, Colombia.
- Gilligan, Michael J., Eric N. Mvukiyehe, and Cyrus Samii. 2013. "Reintegrating Rebels into Civilian Life: Quasi-experimental Evidence from Burundi." *Journal of Conflict Resolution* 57 (4): 598-626.
- Greenberg, David F. 1985. "Age, Crime, and Social Explanation." *American Journal of Sociology* 91 (1): 1-21.
- Guáqueta, Alexandra. 2009. *Desmovilización y Reinserción en El Salvador*. Bogotá, Colombia: Fundación Ideas para la Paz.
- Gurr, Ted Robert. 1970. *Why Men Rebel*. Princeton, NJ: Princeton University Press.
- Hill, Richard, Gwendolyn Taylor, and Jonathan Temin. 2008. "Would You Fight Again? Understanding Liberian Ex-Combatant Reintegration." Special Report No.211, USIP, Washington, DC.
- Hirschi, Travis. 2001. *Causes of Delinquency*. New Brunswick, NJ: Transaction.

- Human Rights Watch. 2010. *Herederos de Los Paramilitares. La Nueva Cara de La Violencia En Colombia*. Bogotá, Colombia: Author.
- Human Rights Watch. 2014. "Côte d'Ivoire: Nowhere to Turn for Protection: Violent Crime Marks Daily Life in the North." December 15, 2014. <http://www.hrw.org/news/2014/12/15/cote-d-ivoire-nowhere-turn-protection> [Date accessed: April 10, 2016]
- Humphreys, Macartan, and Jeremy M. Weinstein. 2007. "Demobilization and Reintegration." *Journal of Conflict Resolution* 51 (4): 531-67.
- International Crisis Group. 2013. "The Philippines: Dismantling Rebel Groups." Asia Report No. 248, International Crisis Group, Jakarta, Indonesia.
- Jennings, Kathleen M. 2007. "The Struggle to Satisfy: DDR through the Eyes of Ex-combatants in Liberia." *International Peacekeeping* 14 (2): 204-18.
- Kalyvas, Stathis N., and Matthew Adam Kocher. 2007. "How 'Free' is Free Riding in Civil Wars? Violence, Insurgency, and the Collective Action Problem." *World Politics* 59 (2): 177-216.
- Kaplan, Oliver, and Enzo Nussio. 2015. "Community Counts: The Social Reintegration of Ex-combatants in Colombia." *Conflict Management and Peace Science*. doi: 10.1177/0738894215614506.
- Klevens, Joanne, Ofelia Restrepo, Juanita Roca, and Adriana Martinez. 2000. "Comparison of Offenders with Early- and Late-Starting Antisocial Behavior in Colombia." *International Journal of Offender Therapy and Comparative Criminology* 44 (2): 194-203.
- Mashike, Lephophotho. 2007. "Former Combatants' Involvement in Crime and Crime Prevention." Research Report, Centre for the Study of Violence and Reconciliation, Johannesburg, South Africa.
- McEvoy, Kieran, and Peter Shirlow. 2009. "Re-imagining DDR: Ex-combatants, Leadership and Moral Agency in Conflict Transformation." *Theoretical Criminology* 13 (1): 31-59.
- McMullin, Jareme R. 2013. "Integration or Separation? The Stigmatisation of Ex-combatants after War." *Review of International Studies* 39 (2): 385-414.
- Moloney, Molly, Kathleen MacKenzie, Geoffrey Hunt, and Karen Joe-Laidler. 2009. "The Path and Promise of Fatherhood for Gang Members." *British Journal of Criminology* 49 (3): 305-25.
- Moratti, Massimo, and Amra Sabic-El-Rayess. 2009. *Transitional Justice and DDR: The Case of Bosnia and Herzegovina*. New York, NY: International Center for Transitional Justice.
- Muggah, Robert, ed. 2009. *Security and Post-conflict Reconstruction. Dealing with Fighters in the Aftermath of War*. Abingdon, UK: Routledge.
- Muggah, Robert, and Chris O'Donnell. 2015. "Next Generation Disarmament, Demobilization and Reintegration." *Stability: International Journal of Security & Development* 4 (1): 1-12.
- Nussio, Enzo. 2011a. "How Ex-combatants Talk about Personal Security. Narratives of Former Paramilitaries in Colombia." *Conflict, Security & Development* 11 (5): 579-606.
- Nussio, Enzo. 2011b. "Learning from Shortcomings: The Demobilisation of Paramilitaries in Colombia." *Journal of Peacebuilding and Development* 6 (2): 88-92.
- Nussio, Enzo. 2012. "Emotional Legacies of War among Former Colombian Paramilitaries." *Peace and Conflict: Journal of Peace Psychology* 18 (4): 369-83.

- Oppenheim, Ben, Abbey Steele, Juan F. Vargas, and Michael Weintraub. 2015. "True Believers, Deserters, and Traitors: Who Leaves Insurgent Groups and Why." *Journal of Conflict Resolution* 59 (5): 794-823.
- Pollock, Joycelyn M. 1999. *Criminal Women*. Cincinnati, OH: Anderson.
- Ribetti, Marcella. 2009. "Disengagement and Beyond: Demobilization in Colombia." In *Leaving Terrorism behind: Individual and Collective Disengagement*, edited by Tore Bjørgo and John G. Horgan, 152-69. New York: Taylor & Francis.
- Sampson, Robert J., and John H. Laub. 1997. "A Life-course Theory of Cumulative Dis-advantage and the Stability of Delinquency." In *Developmental Theories of Crime and Delinquency*, edited by Terence P. Thornberry, 133-61. New York: Transaction.
- Sedgley, Norman H., Charles E. Scott, Nancy A. Williams, and Frederick W. Derrick. 2010. "Prison's Dilemma: Do Education and Jobs Programmes Affect Recidivism?" *Economica* 77 (307): 497-517.
- Stedman, Stephen. 1997. "Spoiler Problems in Peace Processes." *International Security* 22 (2): 5-53.
- Tezcür, Güneş Murat. 2010. "When Democratization Radicalizes: The Kurdish Nationalist Movement in Turkey." *Journal of Peace Research* 47 (6): 775-89.
- Theidon, Kimberly. 2009. "Reconstructing Masculinities: The Disarmament, Demobilization, and Reintegration of Former Combatants in Colombia." *Human Rights Quarterly* 31 (1): 1-34.
- Themnér, Anders. 2011. *Violence in Post-conflict Societies: Remarginalization, Remobilizers and Relationships*. London, UK: Routledge.
- Uggen, Christopher. 2000. "Work as a Turning Point in the Life Course of Criminals: A Duration Model of Age, Employment, and Recidivism." *American Sociological Review* 65 (4): 529.
- United Nations. 2006. *Integrated Disarmament, Demobilisation and Reintegration Standards*. New York: UNDDR.
- VerdadAbierta.com. 2015. "Justicia y Paz: la experiencia de los postulados (II) ('Entrevista a 'El Alemán')." November 12, 2015. <http://www.verdadabierta.com/justicia-y-paz/10-anos-de-justicia-y-paz/6067-justicia-y-paz-la-experiencia-de-los-postulados-ii> <https://www.youtube.com/watch?v=dDu771gTFiY> [Date accessed: November 16, 2015]
- Villegas, Cristina. 2009. "Motives for the Enlistment and Demobilization of Illegal Armed Combatants in Colombia." *Peace and Conflict: Journal of Peace Psychology* 15 (3): 263-80.
- Walter, Barbara F. 1997. "The Critical Barrier to Civil War Settlement." *International Organization* 51 (3): 335-64.
- Walter, Barbara F. 2004. "Does Conflict Beget Conflict? Explaining Recurring Civil War." *Journal of Peace Research* 41 (3): 371-88.
- Zukerman Daly, Sarah. 2011. "Bankruptcy, Guns or Campaigns: Explaining Armed Organizations' Post-war Trajectories." Doctoral thesis, MIT, Boston, MA.
- Zyck, Steven A. 2009. "Former Combatant Reintegration and Fragmentation in Contemporary Afghanistan—Analysis." *Conflict, Security & Development* 9 (1): 111-31.